MISSOURI STATE AUDITOR'S OFFICE
FISCAL NOTE (22-052)

Subject

Initiative petition from David Roland regarding a proposed constitutional amendment to Article VIII. (Received July 30, 2021)

Date

August 19, 2021

Description

This proposal would amend Article VIII of the Missouri Constitution.

The amendment is to be voted on in November 2022.

Public comments and other input

The State Auditor's office requested input from the **Attorney General's office,** the **Department of Agriculture,** the **Department of Economic Development,** the **Department of Elementary and Secondary Education,** the **Department of Higher Education and Workforce Development,** the **Department of Health and Senior Services,** the **Department of Commerce and Insurance,** the **Department of Mental Health,** the **Department of Natural Resources,** the **Department of Corrections,** the **Department of Labor and Industrial Relations,** the **Department of Revenue,** the **Department of Public Safety,** the **Department of Social Services,** the **Governor's office,** the **Missouri House of Representatives,** the **Department of Conservation,** the **Department of Transportation,** the **Office of Administration,** the **Office of State Courts Administrator,** the **Missouri Senate,** the **Secretary of State's office,** the **Office of the State Public Defender,** the **State Treasurer's office, Adair County, Boone County, Callaway County, Cass County, Clay County, Cole County, Greene County, Jackson County, Jasper County, St. Charles County, St. Louis County, Taney County,** the **City of Cape Girardeau,** the **City of Columbia,** the **City of Jefferson,** the **City of Joplin,** the **City of Kansas City,** the **City of Kirksville,** the **City of Mexico,** the **City of Raymore,** the **City of St. Joseph,** the **City of St. Louis,** the **City of Springfield,** the **City of Union,** the **City of Wentzville,** the **City of West Plains, Cape Girardeau 63 School District, Hannibal 60 School District, Malta Bend R-V School District, Mehlville School District, Wellsville-Middletown R-1 School District, State Technical College of Missouri, Metropolitan Community College, University of Missouri, St. Louis Community College,** the **St. Louis County Board of Elections,** the **Board of Election Commissioners City of St. Louis,** the **Kansas City Board of Election Commissioners,** the **Platte County Board of Elections,** the **Jackson County Election Board,** and the **Clay County Board of Election Commissioners.**

Christopher W. Hughes, Esq., Policy Director, Ranked Choice Voting Resource Center provided information to the State Auditor's office.

Adam Podowitz-Thomas, Senior Legal Strategist, Electoral Innovation Lab provided information to the State Auditor's office.

Eric H. Bronner, Founder/Executive Director, Veterans for Political Innovation provided information to the State Auditor's office.

Benjamin D. Singer, Executive Director, Show Me Integrity provided information to the State Auditor's office.

Alex Kaplan, Vice President of Policy and Campaigns, and David O'Brien, Policy Counsel, Represent Us provided information to the State Auditor's office.

Rob Richie, President and CEO, FairVote provided information to the State Auditor's office.

Assumptions

Officials from the **Attorney General's office** indicated they expect that, to the extent that the enactment of this proposal would result in increased litigation, they expect that their office could absorb the costs associated with that increased litigation using existing resources. However, if the enactment of this proposal were to result in substantial additional litigation, they may be required to request additional appropriations.

Officials from the **Department of Agriculture** indicated they do not foresee a fiscal impact upon the passage of this petition.

Officials from the **Department of Economic Development** indicated no impact to their department.

Officials from the **Department of Elementary and Secondary Education** indicated no impact to their department.

Officials from the **Department of Higher Education and Workforce Development** indicated no impact to their department.

Officials from the **Department of Health and Senior Services** indicated this initiative petition has no impact on their department.

Officials from the **Department of Commerce and Insurance** indicated this petition, if passed, will have no cost or savings to their department.

Officials from the **Department of Mental Health** indicated this proposal creates no direct obligations or requirements to their department that would result in a fiscal impact.

Officials from the **Department of Natural Resources** indicated they would not anticipate a direct fiscal impact from this proposal.

Officials from the **Department of Corrections** indicated no fiscal impact.

Officials from the **Department of Labor and Industrial Relations** indicated they anticipate no fiscal impact for this initiative petition proposing to amend Article VIII, version 2, with their assumption that the initiative petition only relates to general and primary elections.

Officials from the **Department of Revenue** indicated no impact.

Officials from the **Department of Public Safety - Office of the Director** indicated no impact for their department, Director's Office.

Officials from the **Department of Social Services** indicated this will not create a fiscal impact for their department.

Officials from the **Governor's office** indicated this proposal relating to elections should not fiscally impact their office.

Officials from the **Missouri House of Representatives** indicated no fiscal impact.

Officials from the **Department of Conservation** indicated there is no anticipated fiscal impact (cost or savings) to their department associated with this proposal.

Officials from the **Department of Transportation** indicated this initiative petition should not have a fiscal impact to their department/Missouri Highways and Transportation Commission.

Officials from the **Office of Administration** indicated this proposal relating to elections should not fiscally impact their office.

Officials from the **Office of State Courts Administrator** indicated there is no fiscal impact on the courts.

Officials from the **Missouri Senate** indicated they anticipate no fiscal impact.

Officials from the **Secretary of State's office** indicated this ballot measure would alter the method of elections for statewide offices, Congressional seats, and members of the General Assembly.

Under the current model, each party runs candidates on its own ticket, with the top vote-getter from each party advancing to the general election, joined by any independent or write-in candidates. The proposed measure would instead have candidates of all parties as well as write-ins (independent candidates are not addressed) appear on one nonpartisan

primary ticket, with the four highest vote-getters advancing to the general election. Such general election would then be conducted using ranked-choice voting.

There are four potential areas of expense which could be incurred in implementing this measure: ballot production costs, the required public education campaign, reprogramming of the state election management system, and replacement of voting machines. The state may be required to pay any or all of these costs under Article X, Section 21 of the Missouri Constitution. There is also one potential source of revenue relating to candidate filing fees.

Traditionally, political party candidates pay a filing fee to the party of their choice before filing to appear on a primary ballot. This measure would instead have each candidate pay a $100 filing fee to the Secretary of State. 475 candidates filed for the related offices at the August 2020 primary election. Assuming that this is approximately representative of other years, the state could receive revenues of up to $50,000 for these filing fees in FY 2024. This would be ongoing in even-numbered fiscal years only (fees would be collected in February to March of even-numbered calendar years).

It is anticipated that if an open primary system is put in place, local election authorities could expect some election cost savings due to the reduced number of ballot styles (though these savings could be lessened or overshadowed by an increased cost for printing larger individual ballots). Since the state shares proportional costs for primary elections, any costs or savings by the local election authorities (LEAs) will be shared to a lesser degree by the state in odd-numbered fiscal years. However, due to the scope of the changes that would be involved in instituting this system, the amount of costs or savings to the state is considered to be unknown at this time.

This measure would require their office to conduct a voter education campaign to familiarize voters with the instant runoff voting system and ranked-choice ballots. The precise cost of such a campaign would vary depending on strategic decisions and appropriation by the General Assembly. A statewide educational campaign is estimated to reach or exceed $2,000,000 (one-time cost) beginning in fiscal year (FY) 2024.

Additionally, the Missouri Centralized Voter Registration program (MCVR) would need to be modified to accept ranked-choice vote totals. The total numbers of each different ballot ranking combination would need to be tabulated in MCVR from the LEAs before the instant runoff process could take place, especially in the case of statewide races. This would require programming resources to be devoted beyond those covered under the normal maintenance and upkeep contracts. Labor costs to program this modification are estimated by the vendor at $46,000, to be executed in FY 2023 or FY 2024 in preparation for the time when ranked-choice voting begins in November 2024.

Finally, in order to properly handle ranked-choice ballots, all voting equipment statewide must either be updated with code which allows ranked-choice voting or be replaced with ranked-choice-compatible machines. Since reprogramming can reasonably be considered a lesser cost than full replacement, they present the replacement cost as a maximum for this potential expense. The latest voting systems survey, conducted in 2020, found 5,735

pieces of election equipment in service statewide. At an average replacement cost of $5,000 per machine, this could result in a cost of up to $28,675,000 in FY 2023 or FY 2024.
Each year, a number of joint resolutions that would refer to a vote of the people a constitutional amendment and bills that would refer to a vote of the people the statutory issue in the legislation may be considered by the General Assembly.

Unless a special election is called for the purpose, Referendums are submitted to the people at the next general election. Article III section 52(b) of the Missouri Constitution authorizes the general assembly to order a special election for measures referred to the people. If a special election is called to submit a Referendum to a vote of the people, Section 115.063.2 RSMo. requires the state to pay the costs. The cost of the special election has been estimated to be $7 million based on the cost of the 2020 Presidential Preference Primary.

Their office is required to pay for publishing in local newspapers the full text of each statewide ballot measure as directed by Article XII, Section 2(b) of the Missouri Constitution and Section 116.230-116.290, RSMo. Funding for this item is adjusted each year depending upon the election cycle. A new decision item is requested in odd numbered fiscal years and the amount requested is dependent upon the estimated number of ballot measures that will be approved by the General Assembly and the initiative petitions certified for the ballot. In FY 2014, the General Assembly changed the appropriation so that it was no longer an estimated appropriation.

In FY19, over $5.8 million was spent to publish the full text of the measures for the August and November elections. Their office estimates $75,000 per page for the costs of publications based on the actual cost incurred for the one referendum that was on the August 2018 ballot.

Their office will continue to assume, for the purposes of this fiscal note, that it should have the full appropriation authority it needs to meet the publishing requirements. Because these requirements are mandatory, they reserve the right to request funding to meet the cost of their publishing requirements if the Governor and the General Assembly again change the amount or continue to not designate it as an estimated appropriation.

Officials from the **Office of the State Public Defender** indicated no fiscal impact to their office from this initiative petition.

Officials from the **State Treasurer's office** indicated no fiscal impact to their office.

Officials from **Clay County** indicated they estimate the following costs as a result of this initiative petition:

- ~$20,000 **onetime** software expense to update both primary and general election ballots as well as produce the paper record for each vote in Section 24.2
- ~$25,000 each primary election to print each paper record under 24.2
- ~$25,000 each general election to print each paper record under 24.2

- ~$5,000 each primary election for poll workers to assist with voter inspection of records under 24.2
- ~$10,000 each general election for poll workers to assist with voter inspection of records under 24.2
- ~100,000 for **onetime** software upgrades to fulfill the instant runoff tabulation provisions of Section 25.6-8
- ~5,000 in **onetime** training costs for workers
- ~$10,000 in **onetime** voter education costs under Section 26.12

In sum, ~$135,000 in onetime costs and ~$65,000 in recurring costs every even election year (both primary and general).

Officials from **Greene County** indicated the fiscal note for this initiative petition is uncertain in Section 24, due to the undefined terminology for "voting machine." Depending on how courts interpret the term "every voting machine," costs for their county could range into the hundreds of thousands of dollars to zero.

In Section 25 the costs will be ongoing and are estimated to be a minimum of $23,000 per August primary.

Here is a general breakdown:

Election Equipment Testing Estimate Costs:

DS200 Testing Hours: **$3,620.62**

ExpressVote Testing Hours: **$3,070.53**

Total for Equipment Testing: **6,691.15**

August Primary Estimated Costs:

In an August Election open primary with a single ballot type (all parties and issues, instead of five partied ballots and one issues only ballot), with write-in lines the cost is estimated to be: **$16,651.95.**

Officials from the **City of Kansas City** indicated this petition has no fiscal impact on their city.

Officials from **Metropolitan Community College** indicated no fiscal impact to their college.

Officials from the **St. Louis County Board of Elections** indicated their Board of Elections estimates this would have the following impact: $100,000 one-time costs for Voter Education Campaign.

Officials from the **Board of Election Commissioners City of St. Louis** indicated the fiscal impact would be the cost of a new voting system, as the current voting system they have cannot tabulate ranked choice voting.

They are in the process of acquiring a new voting system, and, more than likely, the system they obtain will be able to handle this.

The cost of a new voting system is upwards of $5 million.

Officials from the **Kansas City Board of Election Commissioners** indicated there are many costs and concerns associated with this amendment. They are described below:

1) Petitions must be checked. Staff overtime and additional temporary staff expenses may be incurred at an estimated cost of $15,000 to $40,000 because based on how rank choice works the ballots have to be separated and stacked for retabulation. They would bring in temps and incur staff overtime to process the statewide petitions. It would be done one-time only.

2) An election in the Kansas City portion of Jackson County costs roughly $625,000. This cost will be prorated among all the entities that participate in that election, based on voter registration.

3) If this election becomes law, then their computers used for tabulation would have to be sent back to the vendor and the hardware wiped clean and the new software would be installed for $15,000 (one-time cost). The software for the ballot marking devices must be upgraded and installed by the vendor. Cost is estimated between $25,000 to $50,000 (one-time cost).

4) Public notice would need to be sent to all voters or published in newspapers at an estimated cost of $25,000 to $100,000 to provide detailed information of the new process. These cost would be for at least a year until the public grasps what is going on.

5) Election day Judge and staff training would be estimated at $35,000 per election.

6) Additional security required for election night and days after the elections through certification due to the unrest that will be caused by the lack of understanding of rank choice and how it works. Estimated cost $25,000 per election.

In addition, each election they will have to spend $3,500 for assistance with tabulation of every election. It is ridiculous that they will not be in charge of tabulating any more elections if this system is put into place.

Also, additional mailers will be required for voter instructions up to $50,000 per election.

Officials from the **Platte County Board of Elections** indicated this proposal has no clear fiscal impacts. The testing requirement is presumably different from any testing they currently do, so it may result in unknown costs.

Officials from the **Jackson County Election Board** indicated:

Assuming additional steps may be required to meet the stated federal standards requested in this petition, the Board may have costs associated with this requirement. Currently, JCEB follows the rules set for by the Missouri Secretary of State: 15 CSR 30-10.120, 15 CSR 30-10.130, 15 CSR 30-10.140, 15 CSR 30-10.150 and 15 CSR 30-10.160.	$5,000.00
Potential Software Cost	$5,000.00
Ranked Choice Voting Election Day Support of Vendor - per year	$27,000.00
Additional Staff - Depending on Election - per election	$4,000.00 - $6,000.00
Ranked Choice Voting - Voter Education - Mailers - Printing - Postage	$80,000 - $150,000.00
Reprinting of Voting Instruction Material	$5,000.00
Additional Voting Equipment	$500,000.00
Estimated Cost for Jackson County Election Board	$626,000.00 - $698,000.00
Per year or per election ongoing costs	

Christopher W. Hughes, Esq., Policy Director, Ranked Choice Voting Resource Center provided the following information:

RANKED CHOICE VOTING RESOURCE CENTER

ELECTION ADMINISTRATION RESOURCE CENTER

August 11, 2021

Nicole Galloway
State Auditor of Missouri
301 West High Street, Room 880
Jefferson City, MO 65102
moaudit@auditor.mo.gov

RE: PETITIONS 2022-051 AND 2022-052

Dear Auditor Galloway,

We are writing on behalf of the Ranked Choice Voting Resource Center regarding the estimated fiscal impact of initiative petitions 2022-051 and 2022-052, which would bring Top 4 open primaries and instant runoff voting ("IRV," sometimes referred to as "ranked-choice voting") to Missouri elections. The Ranked Choice Voting Resource Center is a 501(c)(3) nonprofit organization that provides information, research, and tools to teach the public about ranked-choice voting. The staff of the Resource Center have decades of election administration experience and experience overseeing ranked-choice voting elections at all levels of government. Our nationally recognized center is regarded as the premier ranked-choice voting resource for voters, election administrators, policymakers, and candidates.

We recently conducted a statewide analysis of Missouri's voting equipment in our Missouri RCV Administrative Assessment (https://bit.ly/Missouri-RCV-Admin). In our analysis, we found that 107 of 116 local election authorities (106 counties and one city) in Missouri have RCV capable equipment: equipment that can now, or after a software update, be used to hold ranked-choice voting elections. In these counties, hardware purchases are not necessary to add RCV capability. Software upgrades, however, may be necessary and will need to have their costs negotiated directly with the vendors providing equipment to each local election authority. We do not know how many of these election authorities will need to update their software nor how much it may cost any one authority to make upgrades, so we do not estimate those costs here.

Eight local election authorities (seven counties and one city) have legacy voting equipment – equipment at the end of its usable lifespan – and one local election authority (one county) hand counts its elections. The eight election authorities with legacy voting equipment should replace that equipment soon as it is at the end of its usable lifespan. All modern voting equipment available today includes ranked-choice voting capability. By replacing that legacy equipment, these election authorities will also gain ranked-choice voting capability. The hand count county can conduct ranked-choice voting elections by hand though we suggest using voting equipment to speed up the counting process considerably.

833 VOTE RCV
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info@rcvresources.org
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RANKED CHOICE VOTING RESOURCE CENTER

ELECTION ADMINISTRATION RESOURCE CENTER

A previous fiscal note for Petition 2022-19 estimated that purchasing a single voting machine would cost $5,000. Based on publicly available information about voting machines used in the state, we estimate that there are 453 voting machines to be replaced in the eight local election authorities with legacy voting equipment. Replacing all legacy voting equipment in Missouri and purchasing equipment for the hand count county at a rate of $5,000 per machine will cost approximately $2,270,000. We reiterate, however, that this legacy voting equipment should be replaced regardless of whether ranked-choice voting is adopted in the state.

The Board of Aldermen in St. Louis City have passed a bill that includes $5,000,000 for the Board of Elections for the City of St. Louis to update election hardware, software, and IT infrastructure, among other upgrades. Page 13, Line 17: https://www.stlouis-mo.gov/government/city-laws/upload/legislative/boardbills/floor-amended/BB%202%20CSAA%20Combined%20Perfected%202.pdf. If passed, this bill would enable St. Louis City, the largest election authority among those with legacy voting equipment, to replace its 300 pieces of legacy equipment with modern, RCV capable equipment. If passed, this would bring our total cost estimate down to $765,000.

Based on this analysis, the fiscal impact of 22-051 and 22-052 for purchasing RCV capable equipment will be between $0 and $2,270,000 in one-time costs.

Thank you for your consideration of this submission. If you have any questions, please contact the Ranked Choice Voting Resource Center at info@rcvresources.org or 1-833-VOTE-RCV (1-833-868-3728).

Sincerely,

Chris Hughes
Policy Director

833 VOTE RCV
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Adam Podowitz-Thomas, Senior Legal Strategist, Electoral Innovation Lab provided the following information:

August 5, 2021

Nicole Galloway
State Auditor of Missouri
301 West High Street, Room 880
Jefferson City, MO 65102
moaudit@auditor.mo.gov

RE: PETITIONS 2022-051 AND 2022-052

Dear Auditor Galloway,

We write today regarding the estimated fiscal impact of initiative petitions 22-051 and 22-052, two bills that would implement a new ranked-choice voting election scheme to elections conducted in Missouri.

We are Dr. Sam Wang, professor at Princeton University and the Director of the Princeton Gerrymandering Project and Electoral Innovation Lab, and Adam Podowitz-Thomas, Senior Legal Strategist for the Lab. The Electoral Innovation Lab takes an engineering-like approach to democracy repair. We use theory and analysis to anticipate how problems in representation, engagement, and depolarization can be solved before they become widespread. This comprehensive approach is used to develop policy reforms, inform legal scholarship and academic research. Ultimately, we seek to test proposed policies: legislative actions, election rules, redistricting optimization, and community strategies. In recent years we have applied our investigational methods to voting reforms, including ranked-choice voting in Maine and Alaska.

Many other jurisdictions have experience implementing ranked-choice voting systems and have done thorough fiscal impact analyses thereof, and can provide some evidence of costs should Missouri implement this voting system.

Implementation costs in other states and cities: $400,000 to $1.1 million

Maine implemented ranked-choice voting in 2018. The state analyzed the costs of implementing the new system during the first year and found that the total fiscal impact to the state was $441,804, the largest portion of which was actually the requirement to print a separate ballot to run a referendum measure on an unrelated matter.[1] Voters in Alaska recently approved similar

[1] See https://www.maine.gov/sos/cec/elec/upcoming/pdf/rcv.costs.2018.pdf

voting reforms to those under consideration in Missouri. The state's official estimate of costs for needed ballot tabulation equipment was only $534,300.[2]

A pending bill in Colorado, which would implement ranked-choice voting in Colorado's all-mail balloting system, was analyzed by that state's legislative council staff. Their estimate of the cost of implementation in the first year was $580,000, with costs for continuing operation decreasing each subsequent year, to a low of $70,500 in the fourth year of implementation.[3]

Some cities in California have utilized ranked-choice voting for many years. One analysis done by Alameda County (where Oakland and Berkeley are located) regarding the implementation of RCV during the 2010 election cycle found that costs for initial implementation would be $1,135,604 during the first year, including a voter education campaign.[4]

Missouri implementation costs are potentially less than $1.0 million

A comprehensive analysis conducted by the experts at the Ranked Choice Voting Resource Center shows that at most 9 out of 116 local election authorities in Missouri have voting machines that are incompatible with ranked-choice voting methods. That report notes that "92% of Missouri's jurisdictions have modern, RCV-capable voting equipment."[5]

As a worst-case scenario, the fiscal impact 22-049 and 22-050 would arise from replacing voting machines in all 9 jurisdictions currently lacking machines, for an estimated total of $2.5 million. However, in these 9 jurisdictions, many machine upgrades are already planned even without any new laws, and will likely be done by the time 22-049 and 22-050 would take effect, after the 2022 cycle. Public records show that jurisdictions without ranked-choice voting-compatible machines are already working to purchase and deploy new, modern machines. In particular, in St. Louis City, home to over two-thirds of the people living in the 9 jurisdictions requiring updated machines, local leaders intend to use funds received from the American Rescue Plan Act of 2021 "for the purposes of updating Election Hardware, Software, IT infrastructure."[6] Therefore we estimate that the necessary purchases of voting machines above and beyond such planned upgrades have the potential to fall **below $1.0 million**.

In addition, we note that there will be an unknown amount of savings in future years because the primary election will require only one ballot instead of one for each partisan primary, as is now the case.

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[2] See https://www.elections.alaska.gov/petitions/19AKBE/19AKBEStatementOfCosts.pdf
[3] See http://leg.colorado.gov/sites/default/files/documents/2021A/bills/fn/2021a_hb1071_r3.pdf
[4] See https://www.cityofberkeley.info/uploadedFiles/Clerk/Level_3_-_City_Council/2010/02Feb/2010-02-09_Item_16a_Council_Findings_for_Ranked_Choice_Voting.pdf
[5] See: https://bit.ly/Missouri-RCV-Admin
[6] See https://www.stlouis-mo.gov/government/city-laws/board-bills/boardbill.cfm?bbDetail=true&BBId=13789

Thank you for your consideration of this submission. If you have any questions, please do not hesitate to call us at (609) 258-0388 or email us at sswang@princeton.edu or podowitz-thomas@princeton.edu.

/s/ Samuel Wang

Prof. Samuel S.-H. Wang
Director
Electoral Innovation Lab
Neuroscience Institute, Washington Road
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/s/ Adam Podowitz-Thomas

Adam Podowitz-Thomas, Esq.
Senior Legal Strategist
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Green Hall
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Eric H. Bronner, Founder/Executive Director, Veterans for Political Innovation provided the following information:

★ VETERANS ★
FOR POLITICAL INNOVATION

Mobilizing the Military-Connected Community for Powerful Electoral Reforms

July 23, 2021

The Honorable Nicole Galloway
State Auditor of Missouri
301 West High Street, Room 880
Jefferson City, MO 65102
moaudit@auditor.mo.gov

RE: PETITIONS 2022-049 AND 2022-050

Dear Auditor Galloway,

I am writing to you today as the founder and Executive Director of Veterans for Political Innovation regarding the estimated fiscal impact of initiative petitions 22-049 and 22-050. These initiative petitions, if passed, would bring Top-4 single-ballot primaries and ranked choice voting ("RCV"), (sometimes referred to as instant runoff voting or "IRV"), to Missouri elections.

Veterans for Political Innovation (VPI) is a fiercely cross-partisan national nonprofit, based out of our "shedquarters" in Webster Groves, Missouri. VPI exists to educate and inspire the military-connected community to mobilize and advocate for three, targeted nonpartisan electoral reforms, including this innovative "Top-4" voting reform package. VPI will be mobilizing one of America's most trusted groups, as strategic assets, to help restore trust in American democracy through reforms that create better, more competitive elections.

First, it is important to note that, based on the lessons learned from other states, oftentimes, ranked choice voting (RCV) costs less to implement than expected. For example, voters in Alaska recently approved a similar "Top-4" / instant runoff voting reform package in November 2020. Their official estimate of costs for needed ballot tabulation equipment was only $534,300. *(See* Alaska Office of Management and Budget: Estimate of Costs for 19AKBE).

The vast majority of Missouri's Local Election Authorities are ready, willing and able to implement ranked choice voting. Indeed, a comprehensive analysis conducted by the experts at the Ranked Choice Voting Resource Center shows that **at least 107 of 116 local election authorities in Missouri have voting machines that are compatible with ranked-choice voting methods**. In that report, we see that "92% of Missouri's jurisdictions have modern, RCV-capable voting equipment." (*See:* Missouri: Ranked Choice Voting State Readiness Assessment, 2021 Edition)

Furthermore, some jurisdictions are already moving forward with voting machine upgrades. If passed, petitions 22-049 and 22-050 would not take effect until elections after the 2022 cycle. We know from public records that some jurisdictions, who did not have ranked choice voting-compatible machines at the time the above-reference report was completed, are actively working to purchase and deploy new, modern machines — with or without passage of 22-049 and 22-050. For example, in St. Louis City, local leaders intend to use funds received from the American Rescue Plan Act of 2021 " for the purposes of updating Election Hardware, Software, IT infrastructure." (*See* St. Louis City Board Bill 2 (2021 - 2022)

Given the widespread use of RCV compatible machines in Missouri, along with yet to be determined machine upgrades that will happen with or without passage of 22-049 and 22-050, reputable sources who have analyzed Missouri's elections and voting systems ***estimate that the fiscal impact 22-049 and 22-050 likely will be between $0 and $2,264,537.***

Thank you for your public service, and for your time and consideration of this submission. If you have any questions, please do not hesitate to contact me at: 314.222.0477 or eric@v4pi.us.

Sincerely,

Eric H. Bronner
Founder | Executive Director
Veterans for Political Innovation

Benjamin D. Singer, Executive Director, Show Me Integrity provided the following information:

July 23, 2021

State Auditor Nicole Galloway
301 West High Street, Room 880
Jefferson City, MO 65102

To Auditor Galloway:

I write regarding **fiscal note analysis for initiative petitions 2022-049 and 2022-050** on behalf of Show Me Integrity, Missouri's good government and political reform organization. Our board includes Republicans, Democrats, and independents all committed to a more effective, ethical government of, by, and for the people.

We are Missouri's leading authority on modern voting methods. That is because, **from 2019 to 2021, we led a coalition through Missouri's first and only successful policymaking process, campaign, and implementation of a modern voting system called "approval voting,"** which we did in the City of St. Louis. Previously, St. Louis often elected leaders with less than 40% of the vote in the party primary, and no competitive general election. This left politicians with no mandate to govern, giving special interests greater ability to wield undue influence in city politics.

We explored both approval voting and ranked-choice voting. We consulted closely for months with local election authorities and national experts, including the Ranked Choice Voting Resource Center. After our analysis, we concluded that the City of St. Louis election machines were not compatible with ranked-choice voting at the time. However, as we explored other voting modernization campaigns throughout our state, we discovered that **almost all Missouri election authorities—107 of 116—use election machines that ARE compatible with ranked-choice voting (RCV)**. The only counties that do NOT have RCV-compatible equipment are as follows: City of St. Louis; Henry; Moniteau; Phelps; Mississippi; St. Clair; Sullivan; and Worth.

Based on our estimates, we believe the cost of implementing these two petitions will range from $0 to approximately $2,265,000 (453 machines). The range depends on various appropriations bills to upgrade old machines across the remaining 9 counties—some or all of which may move forward regardless of these two initiative petitions.

Please do not hesitate to contact us if you have any questions.

For our Republic,

Benjamin D. Singer, Executive Director
Show Me Integrity | (314) 239-1308
Benjamin@ShowMeIntegrity.org

Alex Kaplan, Vice President of Policy and Campaigns, and David O'Brien, Policy Counsel, Represent Us provided the following information:

July 26, 2021

Nicole Galloway
State Auditor of Missouri
301 West High Street, Room 880
Jefferson City, MO 65102
moaudit@auditor.mo.gov

RE: PETITIONS 2022-049 AND 2022-050

Dear Auditor Galloway,

We are writing on behalf of RepresentUS regarding the ballot petitions officially named 2022-049 and 2022-50, which would bring Top 4 open primaries and instant runoff voting ("IRV," sometimes referred to as "ranked choice voting") to Missouri elections. RepresentUs is a national, nonpartisan organization focused on improving America's political system. We work with partners and volunteers across the political spectrum to pass democracy reforms at the state and local level. RepresentUS has helped grassroots campaigns to bring reforms like Top 4 and IRV across the country.

In our experience, the costs associated with implementing IRV are often far below what many initially expect and we expect this trend to hold in Missouri. Most counties will not need to replace their existing voting machines. According to a comprehensive analysis by the Ranked Choice Voting Resource Center, the vast majority of counties in Missouri (106) already have voting machines capable of conducting elections with IRV.[1] According to an evaluation of another petition involving IRV in Missouri, the estimated cost to replace a single voting machine would be $5,000.[2] Under this formula, the total cost of replacing voting machines unable to run IRV would be well under $3,000,000.[3]

For comparison, when Alaska Division of Elections's fiscal note for a ballot measure to implement the same policy that 2022-49 and 2022-50 it determined that 137 machines would have to be replaced at cost of $3,900 each, for a total cost of $534,300.[4] In the majority of counties that will not need to replace voting machines, costs will be more similar to implementation in Maine, which also did not need to upgrade its voting machines. When Maine

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[1] Ranked Choice Voting Resource Center, Missouri Ranked Choice Voting State Readiness Assessment 2021 Edition, p. 11 (attached in email).
[2] Fiscal Note for 2022-019.
[3] This is based on the estimate that there are approximately 453 that would need to be replaced in the seven counties (including St. Louis City) that do not currently have IRV-capable machines.
[4] Alaska Division of Elections, 19AKBE - Statement of Costs, https://www.elections.alaska.gov/petitions/19AKBE/19AKBEStatementOfCosts.pdf. The Division of Elections also estimates the total cost of implementation to be $803,593, including costs for things like voter education ($150,000) and language assistance ($57,416).

used IRV for the first time in 2018, its Secretary of State reported that the entire cost of statewide implementation that year was $441,804.[5]

Considering the experiences of other jurisdictions that have adopted IRV, we expect the cost of implementation in Missouri to be fairly modest. Thank you for your time and attention to this matter.

Sincerely,

Alex Kaplan
Vice President of Policy and Campaigns

David O'Brien
Policy Counsel

[5] Maine Office of the Secretary of State, Maine Costs for Ranked-choice Voting in 2018, https://www.maine.gov/sos/cec/elec/upcoming/pdf/rcv.costs.2018.pdf.

RANKED CHOICE VOTING RESOURCE CENTER

ELECTION ADMINISTRATION RESOURCE CENTER

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Ranked Choice Voting State Readiness Assessment

2021 Edition

Table of Contents

Ranked-Choice Voting and Election Administration in the State of Missouri

Introduction

Election administration is the day-to-day work required to run elections in the United States. These assessments provide a high-level introduction to election administration practices in a given state and briefly analyze the likely ease of adapting that election administration infrastructure to ranked-choice voting (RCV). The people tasked with administering elections are known as election administrators. In most states, the state-level election administrator is the Secretary of State, along with City/County Clerks or City/County Boards of Elections administering elections at the local level.

These assessments do not provide an analysis of the step-by-step procedures of election administration in a given state. However, such fine-grained details are frequently important to consider and to execute properly in any election, ranked-choice or not. These assessments are kept at a high level due to the large amount of research required even to produce a high-level analysis of election administration practices in a given state. Many of the day-to-day procedures and requirements for actually running an RCV election in a jurisdiction are not covered in these assessments, but those details remain important. If you are interested in a more detailed assessment of your state, please reach out to the Ranked Choice Voting Resource Center (info@rcvresources.org or 1-833-VOTE-RCV), and we can work with you on producing such an assessment.

These assessments provide scores grading the readiness of each state to run RCV elections statewide. Scores are based on what voting systems each state uses, and states are labeled as **RCV Ready**, **RCV Capable**, **Prepping for RCV**, or **Updates Needed for RCV**. However, we know from experience that election administrators are adept at implementing change when it is necessary to do so. It is not our intention to suggest or prove that any state or local jurisdiction is incapable of implementing RCV. While some states may have more work to do when implementing RCV than others, no state is fundamentally incapable of implementing ranked-choice voting due to their current election administration infrastructure.

Election Administration

In each state, election administration is a locally created process. Depending on the state, administering elections can be highly decentralized, with City or County Clerks acting mostly independent of the state and of one another (as in Wisconsin). Alternatively, it can be highly centralized, with City and County Clerks working in close coordination with or at the direction of the state (as in Maryland). Some states have specific functions that are highly centralized at the state level (like ballot design) while leaving other functions entirely up to the locality (like certifying candidates for election).

Election administration tasks include:

- Registering voters
- Certifying candidates and issues for the ballot
- Designing ballots
- Certifying voting systems for use in elections
- Programming voting systems for upcoming elections
- Administering campaign finance reporting systems
- Sending out absentee ballots
- Testing voting systems before elections (known as Logic & Accuracy testing)
- Training poll workers
- Finding polling places
- Processing and counting ballots
- Canvassing and certifying election results
- Conducting post-election audits
- Conducting recounts
- And more!

Depending on the state, election administrators may have other hats to wear as well. In addition to running elections, many also register deeds, issue marriage certificates, collect documents, and coordinate for City Council meetings, among other tasks. A sample list of these tasks is included in this document.

The federal government is minimally involved in election administration. The Election Assistance Commission (EAC) is the federal agency tasked with overseeing election administration in the United States. They serve as a clearinghouse for election administration documents and best practices from the states, and they set voluntary voting systems standards under their Voluntary Voting System Guidelines (VVSG). Some states require their voting systems to meet EAC certification standards, but most do not. The EAC is intentionally weak and purposefully designed to have little to no power over the work of state and local administrators.

In Missouri, election administration responsibilities are divided between the Secretary of State, who sets election administration standards, certifies voting systems for use in the state, and runs the statewide voter registration database, and County Clerks, County Boards, or City Boards of Elections, who are tasked with the day-to-day administration of elections. County Clerks and Boards are responsible for State, County, and Federal election administration within that county, and City Boards are tasked with managing City, State and Federal elections within that City. Local administration tasks include registering voters, designing ballots, testing and programming voting equipment, and finding polling places. City and County Boards are bipartisan and their members are appointed by the Governor and confirmed by the State Senate. Mo. Rev. Stat. § 115.027.

Missouri does not currently have any RCV jurisdictions, but it should be noted that St. Louis City has approval voting for mayor and part of St. Louis County (Ferguson School Board) has cumulative voting for School Board elections.

The significant components of election administration impacted by ranked-choice voting are ballot design, ballot counting and centralization practices, and voting systems. This analysis considers each of those election administration domains in Missouri.

Ballot Design

Designing and laying out ballots is a crucial yet challenging part of running a successful election. Ballot design must consider the type of each contest, the total number of contests, and the number of candidates in each contest while simultaneously providing voters with clear and concise instructions in any given election and complying with additional state laws regulating ballot design.

Several months before an election, election administrators at all levels work to determine the contests that should appear on the ballot and prepare for the candidate filing or nomination period. After the candidate filing or nomination period closes, election administrators collect lists of all contests and candidates qualified to appear on a ballot. Administrators then either create a ballot using ballot design software from their voting system vendors or software developed in-house. After creating these draft ballots, officials proof ballots for accuracy and adherence to any federal, state, or local design requirements. Once the review process is complete, election administrators submit ballot designs to printing companies who then provide election offices with printed ballots for their elections.[1]

The contests on a given voter's ballot can vary within states, counties, and cities, depending on the offices up for election in that voter's assigned precinct. Due to this variation, election administrators design many different ballots for any given election day. To eliminate confusion, officials assign each ballot a style. This style may be a simple letter or number designation. For larger, more complex elections, ballot style codes can require a more intricate naming process.

Ranked-choice voting adds to this already complex task. RCV contests require both more space on a ballot than non-RCV contests and additional instructions for voters to read. This section describes the ballot design process and analyzes election law in Missouri to understand whether current ballot laws pose a barrier to RCV implementation. The analysis covers the average number of contests that appear on Missouri ballots and whether voting systems in Missouri are already capable of capturing RCV ballots. The section also provides links to resources for designing RCV ballots.

RCV Ballots in Missouri

Ranked-choice voting ballots are impacted when the law requires a certain number of columns in contests, when laws regulate how many ovals can appear in any given contest, and when voting instructions are specified in law. Ballot design is fundamental to voters being able to cast their vote as intended. A well-designed ballot means a voter should understand what they are voting on, how to vote, and how to cast the vote they want.

[1] Ballot design concludes well in advance of election day in order to provide time for printing companies to print out large orders of ballots, sending ballots to voters who are in the military or living overseas, sending ballots to voters who request them by mail, and getting ballots back in time for Logic and Accuracy testing of voting systems (when programmed election equipment is tested to confirm that it will behave as it is programmed to on election day).

In Missouri, rules for ballot design for all elections are set by state statute. Mo. Rev. Stat. §§ 115.237, 115.239, 115.395. These laws relate to ballot layout, including organization of party information and race information, race order on ballot, and other ballot elements. The ballot design laws and restraints from voting systems do not prescribe ballot instructions, how to lay out columns, or oval placement, and so are not in conflict with the design of RCV ballots. In other words, no legal barriers to designing effective RCV ballots exist in Missouri. Practical concerns, such as how to fit RCV contests on the ballot, may arise if RCV is adopted in the state; a detailed analysis of that question is outside the scope of this assessment but the RCVRC can produce example RCV ballots conforming to state laws if requested.

Missouri requires write-in spaces for elections that require write-ins. Mo. Rev. Stat. § 115.237(4). RCV ballots with write-in spaces are included in the appendix.

Contests on Missouri Ballots

Knowing how many contests tend to appear on ballots in Missouri helps when considering what races or how many races should be converted to RCV because RCV takes up more space on a ballot than non-ranked-choice-voting contests. The number of contests on ballots in Missouri varies by year. Federal, state, and county-level offices are all elected in November of even years, while city offices are isselected in April of even or odd years. Mo. Const. art. III, § 11, art. IV § 17 (state office election schedule); Mo. Rev. Stat. §§ 49.020, 51.020, 52.010, 53.010, 54.010, 55.045 (county office election dates); Mo. Rev. Stat. § 115.121(3) (municipal election date). Circuit and associate circuit judges are also elected in Missouri on six and four year terms, respectively, while appeals judges and supreme court justices are appointed then subject to retention elections on 12 year terms. Mo. Const. art. V, § 16 (circuit judge elections); sec. 25(c)(1) (retention elections).

Presidential elections have the longest ballots in Missouri, with a minimum of 15 candidate contests. This sample ballot, from the General Election held in Cass County in 2016, contains 17 candidate contests and 11 ballot questions (though not all ballot questions would appear on all ballots in Cass County).[2]

Due to the large number of contests on ballots in Missouri, administrators may need to limit the number of rankings available to a voter on the ballot due to space limitations of physical ballots. The Center for Civic Design suggests ballots not have more than 5-8 rankings when first introducing RCV for maximum voter comfort with the ballot. Recommendations for Introducing ranked-choice voting ballots, Center for Civic Design, pg. 4. The way voters mark the ballot in RCV contests impacts how many rankings voters get. The two primary forms of ranked-choice ballots in use in the United States are column-style and grid-style ballots. Examples of those

[2] Those 17 candidate contests break down into three federal-level contests, seven state-level contests, five county-level contests, one judicial-branch contest, and one retention contest. The state-level and county-level contests are on four-year terms and so will always be included on a presidential election ballot. Federal-level contests will vary between two and three contests in presidential elections, based on whether a Senate seat is up for election. Judicial-branch and retention contests are on regular (4, 6, or 12 year) schedules, but those will vary by county.

ballots are included in the appendix. Voting systems in 106 counties and one independent city currently used in Missouri can handle either or both of these forms of RCV ballot. Voting systems in eight counties and one independent city cannot, at present, capture then export data from either form of RCV ballot. This brief later discusses in general what the voting systems offer in terms of RCV ballots for use in Missouri.

Ballot Counting and Centralization

There are two major stages to the results reporting process in any election. Unofficial results are incomplete results, a category that includes election night reporting. Official results are the final results of an election. Starting on election night, election officials announce unofficial results. This period of unofficial results reporting is also known as election night reporting. Election night results tend not to include absentee ballots, provisional ballots, or ballots that could not be read by a voting machine in the polling place.[3] Jurisdictions provide updates to unofficial results throughout their post-election canvass when all remaining ballots cast in an election are tallied and counted, and other non-vote-counting procedures are completed.

Official results are the final, certified results of an election. These results include votes from all ballots cast in an election, provide the official record of total votes for each candidate in each contest, and are used as the record to certify the official winner(s) in every contest. The body responsible for certifying state election results varies depending on the state and the level of government being elected. Cities tend to certify results for municipal elections, counties tend to certify results for county elections, and states tend to certify results for state and federal elections.

Whether official or unofficial, reporting results for all elections requires some level of centralization of results. Before centralization, however, ballots must be counted. Counting those ballots requires election workers at precincts, vote centers, mail ballot counting centers, or anywhere else votes are counted to scan in or hand count ballots. Vote totals for every contest on the ballot are printed out by voting equipment or recorded on tally sheets and then centralized at the appropriate elections office.

Processes for centralizing election results vary across states. On election night, poll workers typically print out or copy down results totals for each contest from voting systems in precincts. Poll workers then call in, hand-deliver, or enter those numbers on secure web portals to report totals to city or county election administrators. For state and federal elections, those city or county administrators then report election night results up to the state level, using that same possible variety of reporting procedures. Official results are a combination of those election

[3] Like all elections processes, this varies across and within states. Some states begin scanning absentee ballots on Election Day after polls open while other states wait until polls close to begin scanning ballots. Some states are permitted to begin processing absentee ballots (steps such as checking signatures and other verification measures on absentee envelopes) before election day but may not scan those ballots until Election Day, while other states must wait until Election Day to begin all processing of absentee ballots.

night totals and any other vote numbers derived while processing absentee, provisional, and other ballots scanned after election day.

Unofficial results for ranked-choice voting elections may take the form of first-choice totals for candidates - that is, the number of ballots where each candidate was ranked first. First-choice totals are simple to produce: results tapes from voting equipment can print out first-choice totals in RCV elections just as they print out vote totals in non-RCV elections. As with non-RCV elections, those results can be reported back to the appropriate elections office, which can combine totals and publish just first-choice totals. However, first-choice totals aren't enough if no one candidate has a majority in a single-winner RCV contest or there remain seats to be filled in a proportional RCV contest. This is where RCV differs from other voting methods and where the RCV results reporting process branches off from other types of elections.

Determining the winners in a ranked-choice voting election requires producing a round-by-round count to determine the winner or winners in an election. Running this round-by-round count means we need to know the candidate ranking order on each ballot to know 1) who has the fewest votes in the election and 2) who is ranked next on each of those ballots. We also need to know how many ballots were cast in total to determine how many votes candidates must have to win. This means two things for producing ranked-choice voting results: all ballots or ballot data must be available, and those ballots or ballot data must be centralized. Current results centralization practices tend to rely just on results totals printed out from voting systems themselves, but those printouts do not provide sufficient information to run the round-by-round count. Ranked-choice voting requires that election officials centralize either the ballot data known as cast vote records (CVRs) or the actual ballots to run the round-by-round count. After ballots and ballot data are centralized, that data can be run through ranked-choice voting counting software to produce round-by-round results and determine which candidates emerge with the most votes.

This part of the state assessment is broken into two sections: election night results and official results. The assessment analyzes Missouri's current practices for each and considers how they could be adapted to ranked-choice voting reporting. Each section is discussed in further detail below.

Election Night Results

Ranked-choice voting requires that election officials centralize ballot data or the actual ballots to run the round-by-round count. The speed with which round-by-round results can be reported on election night for the federal- or state-level offices depends on how quickly ballots and ballot data can be transmitted to the appropriate state and local election officials. Election administrators in the United States use a variety of transfer mechanisms for election night results, such as uploading election data to a secure server through a state intranet connection, physically transporting flash drives with precinct election data to local officials, or filling out paper results report sheets at the close of polls which then get centralized to local officials. These transfer mechanisms can all be adapted to ranked-choice voting elections.

At the close of polls, election workers print out vote total tapes from voting machines in their precincts and report those vote totals on tally sheets. Mo. Rev. Stat. §§ 115.449, 115.453, 115.456, 115.467, 115.471, 115.473 (laws defining how votes are to be counted, duties of election officials at close of polls, and tally sheet format.). Those tally sheets, along with copies of the printouts from voting systems, are centralized to a location designated by the county election authority. Mo. Rev. Stat. § 115.475. While Missouri law does not appear to regulate this directly, those results are published on election night as they come in. See election night results. Missouri regulation makes brief mention of digital memory devices from voting systems, but they do not appear to be used for election results reporting. In order to run RCV elections, Missouri needs procedures for how to handle, centralize, and extract data from digital memory devices used in RCV elections, as that cast vote record data makes it possible to quickly run the round-by-round count. 15 CSR 30-10.150 & 30-10.160.

Election night results for RCV contests in Missouri could also be limited to the first round of election results, as is done in Maine RCV contests. First choice totals from machines and any counting boards could be reported out and combined to determine first-round totals, which may indicate winners of elections. Before its RCV elections, Maine communicates to voters, the press, and candidates that election night results include only the first round and that round-by-round results are produced about a week after the election. A similar, transparent process could be adopted in Missouri to ensure all stakeholders know when election results are released. In short, Missouri election law and procedures would require updates to produce round-by-round RCV results on election night.

Official Results

Determining the official results of a ranked-choice voting contest requires the centralization of cast vote records from the entire contest, whether in a district in a city election or from all counties in a statewide election. Cast vote records (CVRs) – digital records of all rankings on each ballot cast on a voting machine – can be centralized during the election night reporting process or when producing official results. That centralization can take many forms. In Ireland, which uses RCV for national and local elections, sets of RCV ballots are manually counted in counting centers distributed across the country. Those totals are called into a central office, which determines results. Other jurisdictions, like Maine, centralize cast vote records and ballots not yet scanned at a single counting location that finalizes all records and produces the round-by-round count.

Missouri law provides for various post-election day ballot counting procedures. Absentee ballots are counted on election day, while election officials process provisional ballots and write-in votes in a central counting location after election day. Mo. Rev. Stat. §§ 115.299, 115.430, 115.468 (laws describing how to count absentee, provisional, and write-in votes, respectively). Results must be certified within 14 days of the election, and results for state-wide and multi-county elections must be sent to the Secretary of State within that same 14 day time frame. Mo. Rev. Stat. §§ 115.507; 115.511. Results for those contests rely on final results reports produced by counties, and current procedures make no mention of any information beyond bare ballot and vote totals. As with election night reporting procedures, Missouri needs procedures for how

to handle, centralize, and extract data from digital memory devices used in RCV elections to quickly produce official round-by-round RCV results.

It remains to be seen how election officials would produce RCV results in Missouri. If the state wanted to use a centralized count, Missouri could choose to follow the Maine model of centralizing all ballots or cast vote records to a single location. The state could rely on election administrators to centralize flash drives by driving them to a central location or by developing a secure process for submitting data digitally. Missouri could also use a bonded courier service, as is done in Maine. A bonded courier collects the ballots from precincts or counties across the state, and officials would then centralize those ballots/cast vote records in a single location in Jefferson City, the state capital. Once all ballots and CVRs are centralized, they can be combined and run through counting software to determine winners and produce the round-by-round count. This procedure would increase the State's involvement in results reporting, a major departure from most state election administration practice.

In an Ireland-style decentralized count, counting centers count up batches of votes. First-choice totals are then reported to a central office from those counting centers; that office adds up vote totals and determines which candidates have the fewest votes or which candidates crossed the threshold of the election. That information is then communicated back to the counting centers, where ballots for the eliminated candidate are transferred, and new totals are reported to the central office. These counting, calling, and re-sorting steps continue until the winner or winner(s) are determined.

Missouri could use a similar decentralized process by changing the manual process to a software-based process and counting ballots by computer. The necessary steps are substantially similar: cast vote records would be centralized from precincts to a counting center in each county and uploaded to a computer, instead of following Ireland's practice of counting each ballot by hand. Then total results from the first round would be called into a central counting office. The central office would determine winners or losers and communicate that back to the counties. County election officials would then instruct the software on which candidate to eliminate or elect and similarly continue the rounds of counting. This procedure would keep more responsibility for election results with local administrators, as opposed to giving more responsibility to the State in a fully centralized count. The state could also choose a middle ground between a single centralized location and locations in every county. For example, decentralized counting centers could be created in each congressional district or population centers in different regions of the state.

Once cast vote records are centralized, election officials would need to run the round-by-round count. Missouri has a patchwork of voting systems from many different voting system vendors. Those vendors produce cast vote records in proprietary formats that do not work in other vendors' systems. Therefore, Missouri would need a tabulation tool that can take in cast vote records from multiple different voting system vendors at once to run their round-by-round count. The only piece of software currently able to handle cast vote records from multiple different

voting systems is the Ranked Choice Voting Resource Center's RCTab. The tabulator is open source and available for free from the Resource Center.[4]

Auditing Info

Post-election audits are used to determine whether the voting machines performed as they should, or if they malfunctioned (due to programming errors or malicious interference of a third party attempting to alter the results of an election). They are typically conducted after all ballots in the election have been counted, but before an election is certified, in case the election must be recounted or rerun due to the results of the audit.

Missouri conducts conventional (also known as traditional) post-election audits. These audits take a fixed percentage of voting districts or machines used in a given election, then compare the paper record of ballots from the machines used in that district to the results produced by that voting machine. The percentage of voting districts audited in an election generally ranges from 2% to 5%, though it goes as low as 1% and as high as 10%, depending on the state where the audit is being conducted. Conventional audits count the same percentage of ballots regardless of the margin of victory in the election being audited. Missouri audits a random, 5% sample of precincts in the state. Mo. Code Regs tit. 15, § 30-10.090; § 30-10.110.

Single- and multi-winner RCV races[5] in the Bay Area and Minneapolis are regularly audited using conventional audit procedures. These audits examine the ballots themselves cast in an RCV contest. Note that designing a conventional election audit should be done in consultation with a professional statistician, regardless of the voting method to be audited. Audits of RCV contests should also include an audit of the counting software used. The RCVRC's RCTab could be used to audit RCV software in Missouri, so long as the software is not used to provide results. An auditor could run each contest's CVR through the RCTab software to check the round-by-round count results produced by the round-by-round counting software in Missouri.

Voting Machines in Missouri

Voting systems are the combination of hardware (scanners/DREs/ballot marking devices) and software used to conduct an election. Election administrators use voting systems to design ballots, set up the rules of an election, cast ballots, capture ballots, count election results, and produce results. Voting systems are a fundamental component of running elections in the United States. The ability of those systems to run an RCV election depends on the age of the equipment in use, the software installed on the voting equipment, and the vendor providing the equipment.

Missouri has 114 counties and two independent cities. Of those, 106 counties and one independent city have voting systems capable of conducting an RCV election, or what we call

[4] The tabulator is compatible with Clear Ballot, Dominion, ES&S, Hart, and Unisyn data.
[5] More information on how these two forms of election differ is available on our website.

RCV Capable. Six counties and one independent city use equipment that is not ready for RCV. A single county uses equipment that would require a workaround for RCV, and the remaining county uses hand count procedures to tabulate election results. All data used here was obtained from Verified Voting's Verifier. The data on this site is updated every two years. The analysis in this section uses the 2020 verifier data.

Voting system assessment	Prepping for RCV	92% of jurisdictions have RCV capable equipment

The state of Missouri requires certification of voting systems before use. The Secretary of State certifies equipment for use in elections after that equipment is tested by a federally certified lab. Mo. Rev. Stat. § 115-225; Mo. Regs. tit. 15, § 30-10. Missouri's requirement that voting systems be tested by a federally certified lab is the third-highest level of scrutiny to which voting equipment is subjected. It can take a few months to test and certify a voting system under this requirement.[6] It is unclear if the Secretary of State's office has specific requirements it is looking for if a system claims RCV capability.

Four major vendors of election equipment in the United States have varying levels of compatibility with ranked-choice voting: Dominion Voting Systems, Election Systems and Software (ES&S), Hart InterCivic, and Unisyn Voting Systems. These vendors include RCV compatibility in their systems through general software updates and through RCV-specific counting software add-ons. While these assessments categorize systems by their RCV compatibility, access to any RCV features may require software updates. Specific details for voting system versions were not researched for this document. This information and how it affects RCV implementation can be researched and included in a more detailed assessment upon request. More detail on how we categorized states and voting equipment is available in the "How We Score States" document.

Election administrators purchase voting systems infrequently, and those purchases typically have a significant price tag. It can be possible to have RCV elections counted round-by-round by a voting system vendor's equipment, which is the most efficient solution. Other times, their systems cannot run that sort of count internally, but the machines can capture RCV ballots. In that case, the data from those ballots need to be exported and run through third-party software capable of running the round-by-round count. The following analysis discusses options for running the RCV count in Missouri using the state's current voting systems.

[6] Once a vendor has had a system tested by a lab, it receives a report outlining the results of that test. That report can then be submitted to the EAC if the vendor is looking for EAC certification (the highest level of testing/certification for voting systems in the US) or a vendor can submit that report to a given State's certification authority (typically through the Secretary of State's office). The certification authority then reviews the testing report and may order additional in-state testing. Following the review and any additional testing, the authority may certify or decline to certify that voting system for use in that state. If any changes are made to a system after testing, it will need to be retested and resubmitted for certification.

Jurisdictions with RCV Capable voting systems

Seven counties and one independent city have RCV-ready **ES&S** equipment. Those jurisdictions use DS200, DS450, and ExpressVote equipment. Single-winner RCV ballots can be marked, scanned, and captured with that equipment. A separate tabulation module is available from ES&S to produce round-by-round RCV results. These machines can also capture data for ballots cast in a multi-winner RCV election but need to have that data run through third-party counting software for multi-winner ranked-choice voting results. Software upgrades are needed to gain native vendor single-winner RCV capability, but data could be exported from the equipment as-is and run through third-party counting software for RCV results for both single- and multi-winner RCV. The RCVRC's RCTab can run the round-by-round count on data from this ES&S hardware. Both grid-style and column-style RCV ballots can be designed within this system. The number of rankings vary depending upon the ballot layout (portrait or landscape) and the number of contests on the page. A list of these jurisdictions is available in the appendix.

Twenty-five counties use **Dominion Voting's** Democracy Suite software with ImageCast Precinct, Precinct with BMD, and/or X equipment. Single-winner and multi-winner RCV ballots can be processed and counted through ImageCast machines. Dominion provides RCV counting software and services at a price, and pricing or activation would need to be determined in discussions with the vendor. Round-by-round results are available through Democracy Suite software version 5.2 or higher, provided a jurisdiction has Dominion's RCV software. Dominion equipment limits ballots to a total of 10 rankings on a grid-style ballot. The RCVRC's RCTab can run the round-by-round count on data from this Dominion hardware. A list of these counties is available in the appendix.

One county has RCV-ready **Hart** equipment. That county uses Verity Central, Scan, and Touch Writer equipment. Single-winner and multi-winner RCV ballots can be captured in this system, provided a jurisdiction has Hart's RCV options enabled in their system. While these systems can capture RCV data, Hart systems do not have the ability to tabulate the RCV round-by-round count. Hart ballot data will need to be exported and run through a separate tabulator to determine the winners in an RCV race. The RCVRC's RCTab software can tabulate round-by-round results in RCV elections run on this Hart equipment. Depending on the software version in use, users should be aware that ballots are limited to five or six rankings in a grid-style ballot on these systems. In order to use this Hart equipment to run an RCV election from end to end, additional testing and software will be required. The county is listed in the appendix.

Seventy-three counties have RCV-ready **Unisyn voting systems** equipment. Those counties use OpenElect OVCS, OVI, OVO and Freedom Vote Tablet equipment. Single-winner and multi-winner RCV ballots can be scanned and captured with that equipment. Software upgrades may be needed to gain access to all RCV functionality available from Unisyn. Unisyn's RCV capability is EAC certified. Ballots are limited to three rankings in a grid style. The RCVRC's RCTab can run the round-by-round count on data from this Unisyn hardware. A list of these counties is available in the appendix.

Jurisdictions with equipment requiring RCV workarounds

One county uses both legacy and newer **ES&S** equipment. The older hardware used in this county, M650, cannot be used for RCV, but the newer DS200s used in this county can. The M650 is legacy hardware that cannot export ballot-level data from elections, which means that the necessary information required to run a round-by-round count of RCV cannot be retrieved. DS200s are used for voting in polling places, while the M650 is used to count absentee ballots. Absentee ballots could be scanned through DS200s instead to avoid the RCV limitations of the M650. The M650 could also be replaced with a newer high-speed scanner, any of which are RCV capable. This county is listed in the appendix.

Jurisdictions without RCV Capable equipment

One county and one independent city have **Premier/Diebold** AccuVote OS and AccuVote TSX machines, which are considered legacy voting equipment. These can read RCV ballots but do not currently export useful ballot level data. Their data could be painstakingly converted to usable data, but that process would be very time-consuming. Work is underway now to make using this data less painstaking. However, replacing these machines is likely the most fruitful avenue, given their age and the relative difficulty of conducting RCV elections with them.

Another two counties have **Sequoia** Optech Insight and AVC Edge machines, which are legacy voting equipment. These can read RCV ballots but do not currently export useful ballot level data. Their data could be painstakingly converted to usable data, but that process would be very time-consuming. Work is underway now to make using this data less painstaking. However, replacing these machines is likely the most fruitful avenue, given their age and the relative difficulty of conducting RCV elections with them. In the meantime, these jurisdictions could potentially borrow equipment from a nearby county with RCV-capable equipment. A list of these jurisdictions is available in the appendix.

Three counties use legacy **ES&S** equipment, the M650. This equipment can scan RCV ballots but does not export a cast-vote record, making software-assisted counting of RCV elections impossible if using this hardware. Subdivisions using this equipment either need to hand count their RCV elections (possible in smaller elections) or update their equipment. A list of these counties is available in the appendix.

Jurisdictions conducting Hand Counts

In Missouri, one county counts elections by hand. Hand counting RCV elections can be time-consuming and depends on the length of the ballot and the number of votes cast, the latter of which is unknown until after the election. One option for handling hand count jurisdictions is the approach taken by Maine, which centralizes all RCV ballots cast in hand count cities and towns to the capital, Augusta, where election administrators scan in those ballots. This process is explained in more detail in the Official Results section above. This county is noted in the appendix.

Conclusion

While 92% of Missouri's jurisdictions have modern, RCV-capable voting equipment, another 8% or so of the state still uses non-RCV capable equipment that would require replacement or a workaround before implementation. Because 92% of Missouri jurisdictions have RCV capable equipment, they fall in our **Prepping for RCV** category, meaning their voting system infrastructure is not yet 100% ready for RCV. Still, substantial progress towards that goal has been made.

If you are interested in a more detailed assessment of your state, please reach out to the Ranked Choice Voting Resource Center (info@rcvresources.org or 1-833-VOTE-RCV), and we can work with you on producing such an assessment.

Appendix

Jurisdictions with RCV Capable voting systems

Dominion ImageCast X/ ImageCast Precinct
Adair
Butler
Callaway
Carroll
Carter
Crawford
Gasconade
Jasper
Lafayette
Livingston
Maries
McDonald
Mercer
Montgomery
Newton
Nodaway
Osage
Pemiscot
Pike
Polk
Saline
Warren
Wright

ImageCast Precinct w/ BMD
Grundy
Harrison

ES&S DS200/ExpressVote
Cooper
Greene
Laclede
Lincoln
Vernon

DS200/DS450/ ExpressVote
Boone
Johnson
Kansas City

Hart Verity Central/Scan/ Touch Writer
St. Louis County

Unisyn OpenElect OVI/ OpenElect OVO
Andrew
Atchison
Audrain
Barton
Bates
Benton
Bollinger
Buchanan
Caldwell
Camden
Cape Girardeau
Chariton
Christian
Clark
Clinton
Cole
Dade
Dallas
Daviess
DeKalb
Dent
Douglas
Dunklin
Franklin
Gentry
Hickory
Holt
Howard
Howell
Iron
Knox
Lawrence
Lewis
Linn
Madison
Marion
Miller
Monroe
Morgan
New Madrid
Oregon
Ozark
Perry
Platte
Pulaski
Putnam
Ralls
Randolph
Ray
Reynolds
Ripley
Schuyler
Scotland
Scott
Shannon
Shelby
St. Charles
St. Francois
St. Genevieve
Stoddard
Stone
Taney
Texas
Washington
Wayne
Webster

OpenElect OVCS/ OpenElect OVI/ OpenElect OVO
Jackson

OpenElect OVO/ OpenElect Freedom Vote Tablet (FVT)
Barry
Cass
Cedar
Pettis

OpenElect OVI/ OpenElect OVO/ OpenElect FVT
Clay

OpenElect OVCS/
OpenElect OVO/
OpenElect FVT
Jefferson

Jurisdictions with voting systems requiring RCV workarounds

ES&S
DS200/M650/AutoMARK
Macon

Jurisdictions without RCV Capable voting equipment

Premier/Diebold
AccuVote OS/
AccuVote TSX
Henry
St. Louis City
Sequoia
Optech Insight/
AVC Edge
Moniteau
Phelps

ES&S
M650/AutoMARK
Mississippi
St. Clair
Sullivan

Jurisdictions conducting Hand Counts

Populex Slate
Worth

Best Practices Grid-Style Ballot

More usability resources available on this page: https://www.rcvresources.org/reports

Official Ballot
Franklin County, California **General Election** **Tuesday, November 6, 2012** **2**/2

Instructions for Ranked Choice Voting

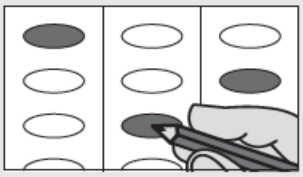
Making selections

Rank candidates in the order of your choice.

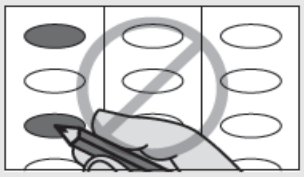
You may rank as many or as few candidates as you wish.

Fill in the oval...

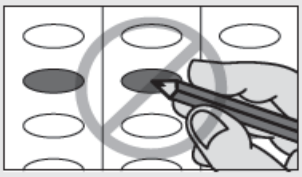
- In the 1st column for your first 1st choice.
- In the 2nd column for your 2nd choice.
- In the 3rd column for your 3rd choice, and so on



Fill in the oval completely.



No more than 1 oval in a column.



No more than 1 oval for a candidate.

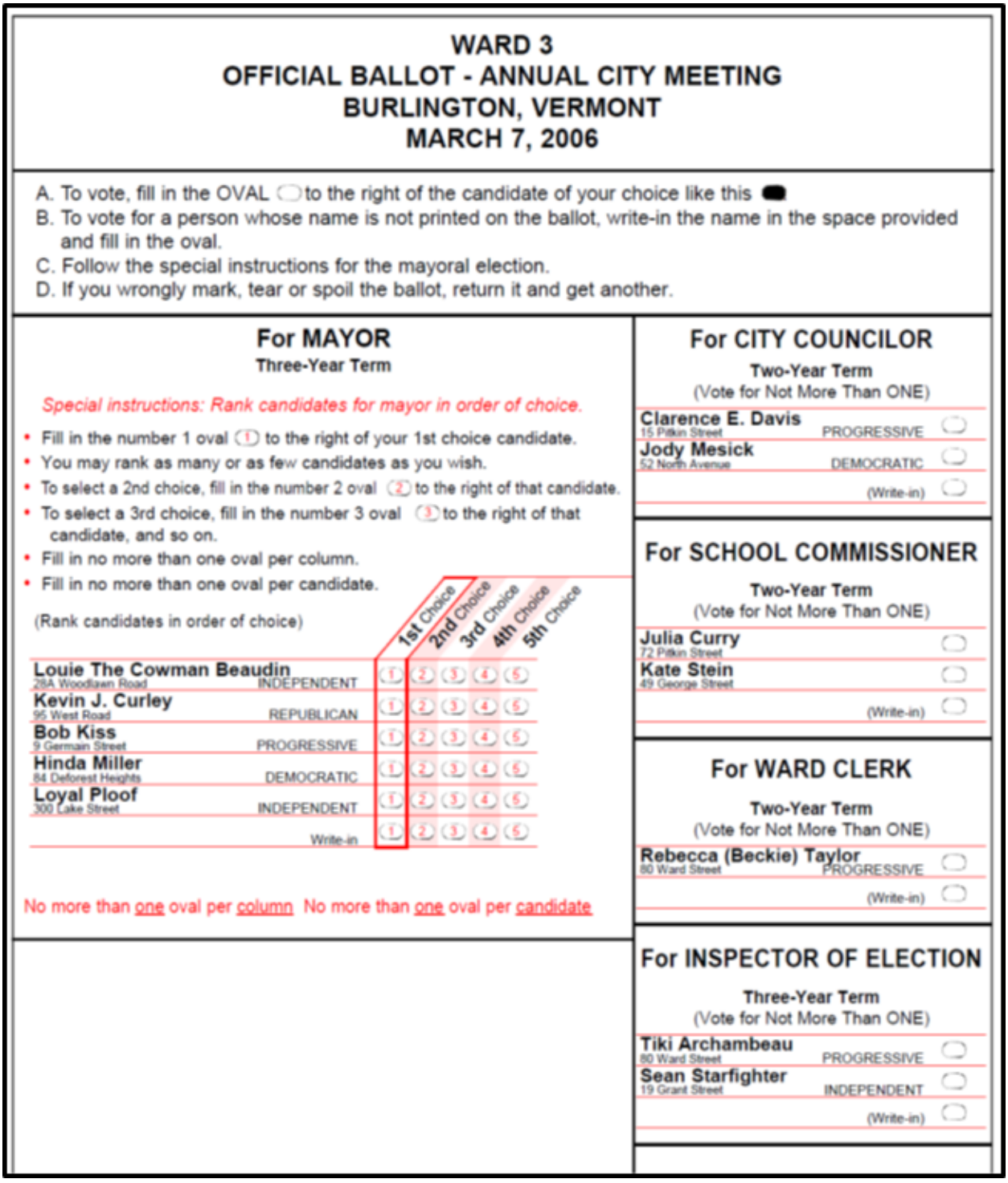
Mayor

Rank up to 10 candidates.

Mark no more than 1 oval in each column.

	First choice 1st	Second choice 2nd	Third choice 3rd	Fourth choice 4th	Fifth choice 5th	Sixth choice 6th	Seventh choice 7th	Eighth choice 8th	Ninth choice 9th	Tenth choice 10th
Frederick Sharp Orange Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Luis Garcia Orange Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Charles Layne Yellow Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Andrew Kowalski Yellow Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Alex Wallace Purple Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Eric Savoy Purple Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Barbara Williams Tan Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Lillian Cohen Lime Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Ann Windsock Independent	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Markos Miller Silver Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭
Elizabeth Harp Silver Party	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭	⬭

AccuVote Grid Ballot with Write-Ins
Burlington, VT 2006



WARD 3
OFFICIAL BALLOT - ANNUAL CITY MEETING
BURLINGTON, VERMONT
MARCH 7, 2006

A. To vote, fill in the OVAL ◯ to the right of the candidate of your choice like this ●
B. To vote for a person whose name is not printed on the ballot, write-in the name in the space provided and fill in the oval.
C. Follow the special instructions for the mayoral election.
D. If you wrongly mark, tear or spoil the ballot, return it and get another.

For MAYOR
Three-Year Term

Special instructions: Rank candidates for mayor in order of choice.

- Fill in the number 1 oval (1) to the right of your 1st choice candidate.
- You may rank as many or as few candidates as you wish.
- To select a 2nd choice, fill in the number 2 oval (2) to the right of that candidate.
- To select a 3rd choice, fill in the number 3 oval (3) to the right of that candidate, and so on.
- Fill in no more than one oval per column.
- Fill in no more than one oval per candidate.

(Rank candidates in order of choice)

		1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice
Louie The Cowman Beaudin, 28A Woodlawn Road	INDEPENDENT	1	2	3	4	5
Kevin J. Curley, 95 West Road	REPUBLICAN	1	2	3	4	5
Bob Kiss, 9 German Street	PROGRESSIVE	1	2	3	4	5
Hinda Miller, 84 Deforest Heights	DEMOCRATIC	1	2	3	4	5
Loyal Ploof, 300 Lake Street	INDEPENDENT	1	2	3	4	5
Write-in		1	2	3	4	5

No more than one oval per column No more than one oval per candidate

For CITY COUNCILOR
Two-Year Term
(Vote for Not More Than ONE)

Clarence E. Davis, 15 Pitkin Street	PROGRESSIVE	◯
Jody Mesick, 52 North Avenue	DEMOCRATIC	◯
	(Write-in)	◯

For SCHOOL COMMISSIONER
Two-Year Term
(Vote for Not More Than ONE)

Julia Curry, 72 Pitkin Street		◯
Kate Stein, 49 George Street		◯
	(Write-in)	◯

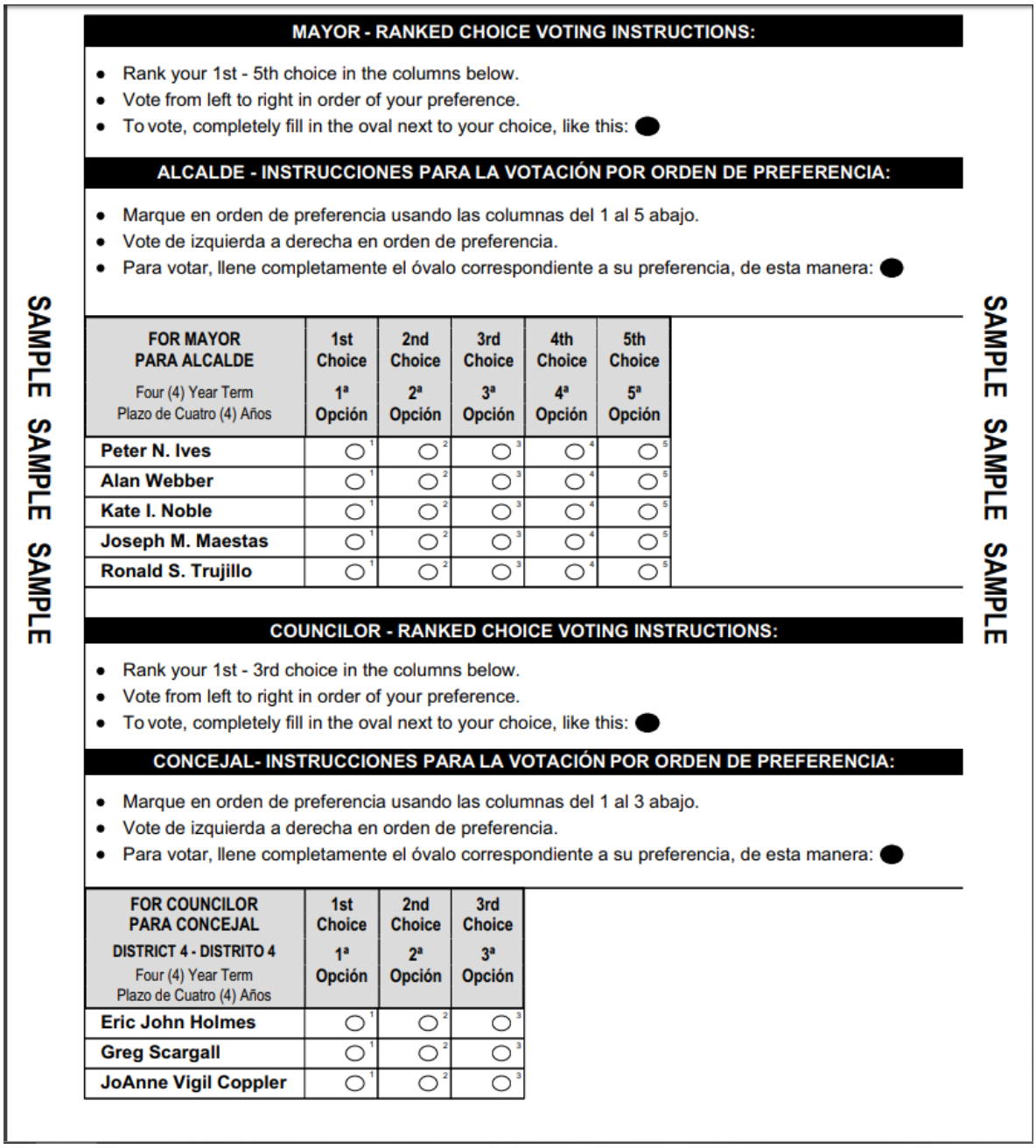
For WARD CLERK
Two-Year Term
(Vote for Not More Than ONE)

Rebecca (Beckie) Taylor, 80 Ward Street	PROGRESSIVE	◯
	(Write-in)	◯

For INSPECTOR OF ELECTION
Three-Year Term
(Vote for Not More Than ONE)

Tiki Archambeau, 80 Ward Street	PROGRESSIVE	◯
Sean Starfighter, 19 Grant Street	INDEPENDENT	◯
	(Write-in)	◯

Dominion Grid Ballot



SAMPLE SAMPLE SAMPLE

MAYOR - RANKED CHOICE VOTING INSTRUCTIONS:

- Rank your 1st - 5th choice in the columns below.
- Vote from left to right in order of your preference.
- To vote, completely fill in the oval next to your choice, like this: ●

ALCALDE - INSTRUCCIONES PARA LA VOTACIÓN POR ORDEN DE PREFERENCIA:

- Marque en orden de preferencia usando las columnas del 1 al 5 abajo.
- Vote de izquierda a derecha en orden de preferencia.
- Para votar, llene completamente el óvalo correspondiente a su preferencia, de esta manera: ●

FOR MAYOR PARA ALCALDE Four (4) Year Term Plazo de Cuatro (4) Años	1st Choice 1ª Opción	2nd Choice 2ª Opción	3rd Choice 3ª Opción	4th Choice 4ª Opción	5th Choice 5ª Opción
Peter N. Ives	○ 1	○ 2	○ 3	○ 4	○ 5
Alan Webber	○ 1	○ 2	○ 3	○ 4	○ 5
Kate I. Noble	○ 1	○ 2	○ 3	○ 4	○ 5
Joseph M. Maestas	○ 1	○ 2	○ 3	○ 4	○ 5
Ronald S. Trujillo	○ 1	○ 2	○ 3	○ 4	○ 5

COUNCILOR - RANKED CHOICE VOTING INSTRUCTIONS:

- Rank your 1st - 3rd choice in the columns below.
- Vote from left to right in order of your preference.
- To vote, completely fill in the oval next to your choice, like this: ●

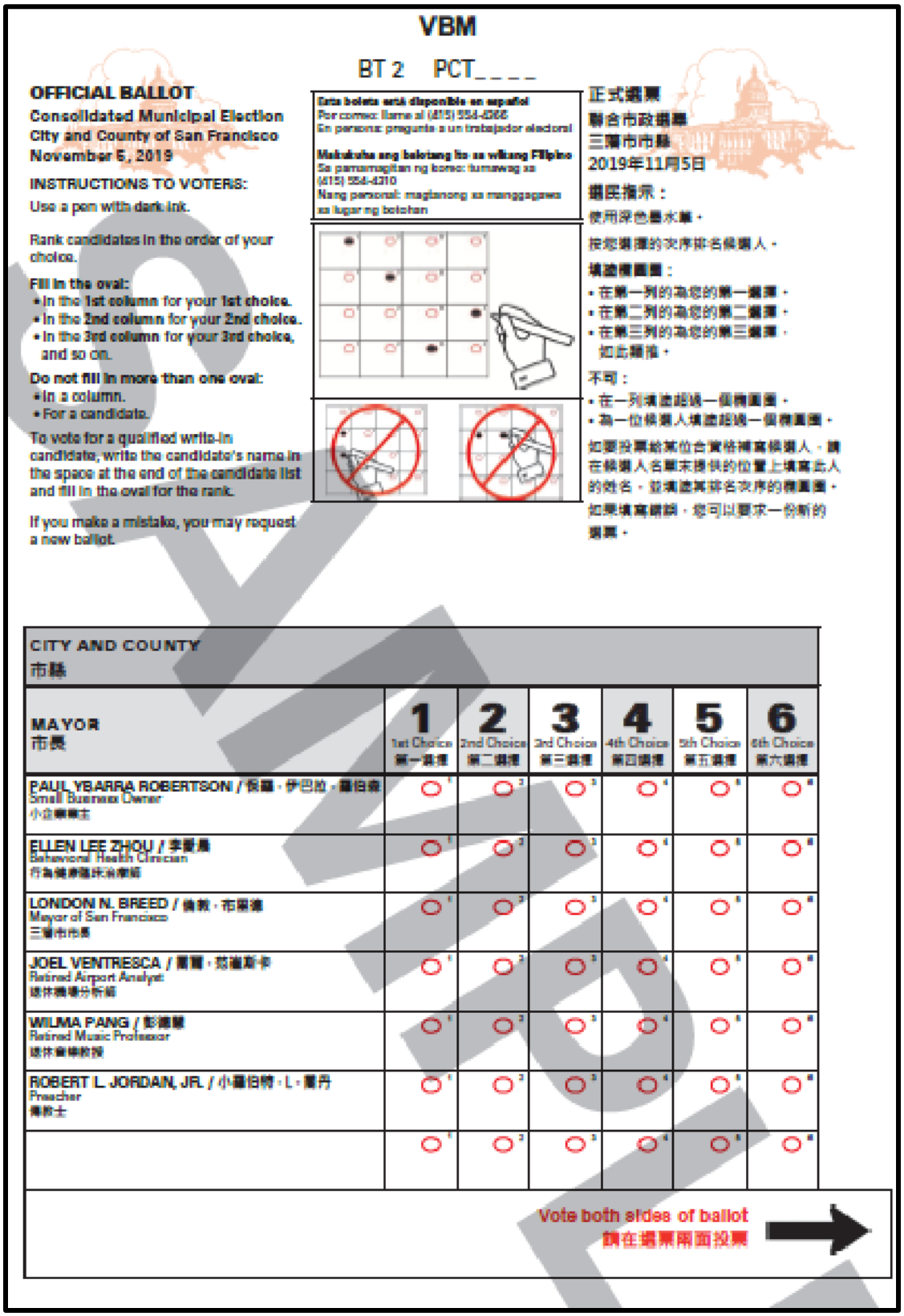
CONCEJAL- INSTRUCCIONES PARA LA VOTACIÓN POR ORDEN DE PREFERENCIA:

- Marque en orden de preferencia usando las columnas del 1 al 3 abajo.
- Vote de izquierda a derecha en orden de preferencia.
- Para votar, llene completamente el óvalo correspondiente a su preferencia, de esta manera: ●

FOR COUNCILOR PARA CONCEJAL DISTRICT 4 - DISTRITO 4 Four (4) Year Term Plazo de Cuatro (4) Años	1st Choice 1ª Opción	2nd Choice 2ª Opción	3rd Choice 3ª Opción
Eric John Holmes	○ 1	○ 2	○ 3
Greg Scargall	○ 1	○ 2	○ 3
JoAnne Vigil Coppler	○ 1	○ 2	○ 3

SAMPLE SAMPLE SAMPLE

Dominion Grid Ballot with Write-Ins



VBM

BT 2 PCT_ _ _ _

OFFICIAL BALLOT
Consolidated Municipal Election
City and County of San Francisco
November 5, 2019

INSTRUCTIONS TO VOTERS:

Use a pen with dark ink.

Rank candidates in the order of your choice.

Fill in the oval:
- In the **1st column** for your **1st choice.**
- In the **2nd column** for your **2nd choice.**
- In the **3rd column** for your **3rd choice,** and so on.

Do not fill in more than one oval:
- In a column.
- For a candidate.

To vote for a qualified write-in candidate, write the candidate's name in the space at the end of the candidate list and fill in the oval for the rank.

If you make a mistake, you may request a new ballot.

Esta boleta está disponible en español
Por correo: llame al (415) 554-4366
En persona: pregunte a un trabajador electoral

Makukuha ang balotang ito sa wikang Filipino
Sa pamamagitan ng koreo: tumawag sa (415) 554-4310
Nang personal: magtanong sa manggagawa sa lugar ng botohan

正式選票
聯合市政選舉
三藩市市縣
2019年11月5日

選民指示：

使用深色墨水筆。

按您選擇的次序排名候選人。

填塗橢圓圈：
- 在第一列的為您的第一選擇。
- 在第二列的為您的第二選擇。
- 在第三列的為您的第三選擇，如此類推。

不可：
- 在一列填塗超過一個橢圓圈。
- 為一位候選人填塗超過一個橢圓圈。

如要投票給某位合資格將寫候選人，請在候選人名單末提供的位置上填寫此人的姓名，並填塗其排名次序的橢圓圈。

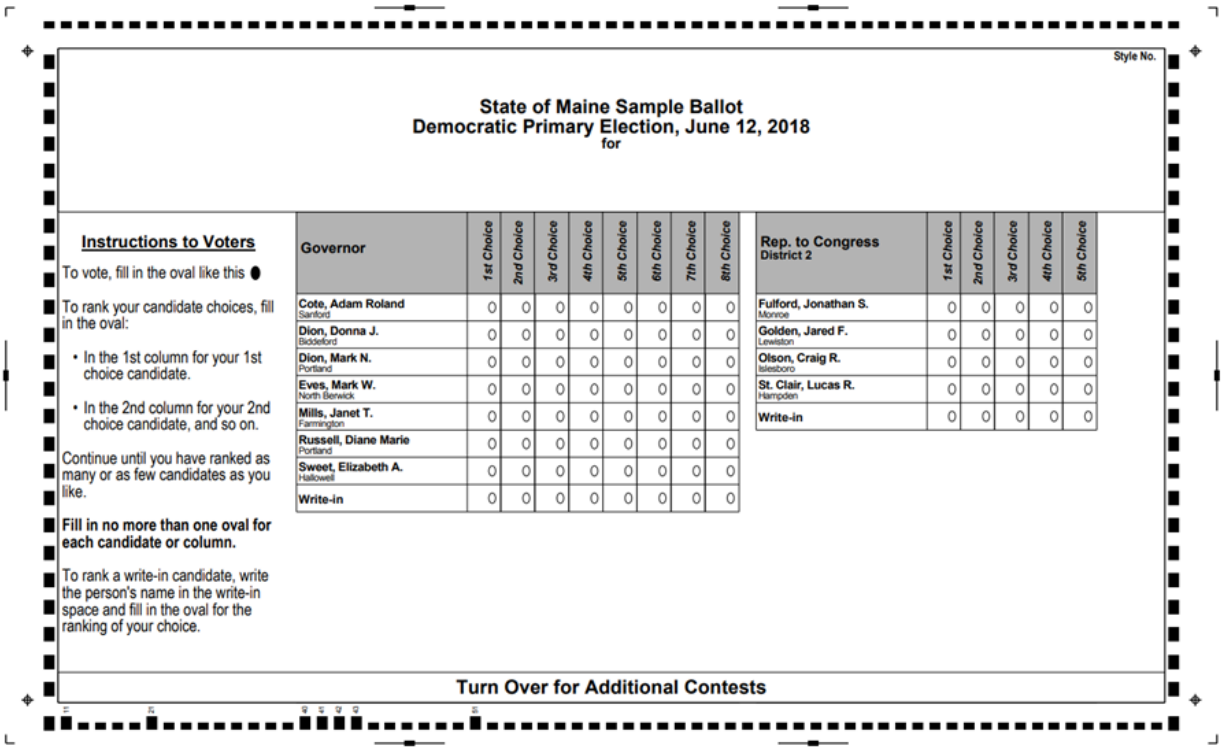
如果填寫錯誤，您可以要求一份新的選票。

CITY AND COUNTY
市縣

MAYOR 市長	1 1st Choice 第一選擇	2 2nd Choice 第二選擇	3 3rd Choice 第三選擇	4 4th Choice 第四選擇	5 5th Choice 第五選擇	6 6th Choice 第六選擇
PAUL YBARRA ROBERTSON / 保羅·伊巴拉·羅伯森 Small Business Owner 小企業業主	○	○	○	○	○	○
ELLEN LEE ZHOU / 李愛燕 Behavioral Health Clinician 行為健康臨床治療師	○	○	○	○	○	○
LONDON N. BREED / 倫敦·布里德 Mayor of San Francisco 三藩市市長	○	○	○	○	○	○
JOEL VENTRESCA / 喬爾·范崔斯卡 Retired Airport Analyst 退休機場分析師	○	○	○	○	○	○
WILMA PANG / 彭維慧 Retired Music Professor 退休音樂教授	○	○	○	○	○	○
ROBERT L. JORDAN, JR. / 小羅伯特·L·喬丹 Preacher 傳教士	○	○	○	○	○	○
	○	○	○	○	○	○

Vote both sides of ballot
請在選票兩面投票

ES&S Grid Ballot with Write-Ins



Style No.

State of Maine Sample Ballot
Democratic Primary Election, June 12, 2018
for

Instructions to Voters

To vote, fill in the oval like this ●

To rank your candidate choices, fill in the oval:

- In the 1st column for your 1st choice candidate.
- In the 2nd column for your 2nd choice candidate, and so on.

Continue until you have ranked as many or as few candidates as you like.

Fill in no more than one oval for each candidate or column.

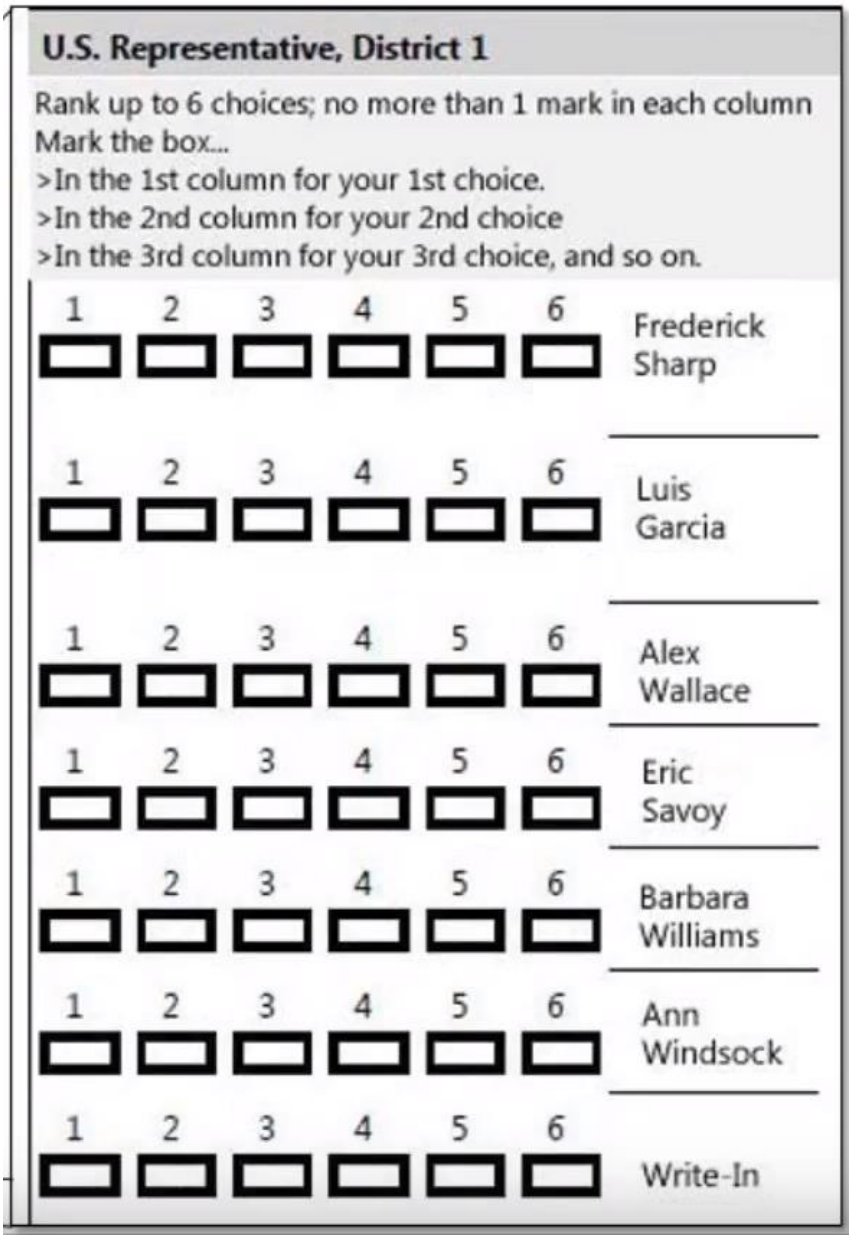
To rank a write-in candidate, write the person's name in the write-in space and fill in the oval for the ranking of your choice.

Governor	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice	6th Choice	7th Choice	8th Choice
Cote, Adam Roland (Sanford)	0	0	0	0	0	0	0	0
Dion, Donna J. (Biddeford)	0	0	0	0	0	0	0	0
Dion, Mark N. (Portland)	0	0	0	0	0	0	0	0
Eves, Mark W. (North Berwick)	0	0	0	0	0	0	0	0
Mills, Janet T. (Farmington)	0	0	0	0	0	0	0	0
Russell, Diane Marie (Portland)	0	0	0	0	0	0	0	0
Sweet, Elizabeth A. (Hallowell)	0	0	0	0	0	0	0	0
Write-in	0	0	0	0	0	0	0	0

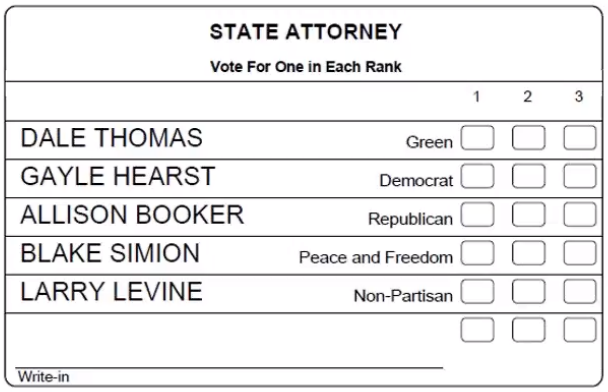
Rep. to Congress District 2	1st Choice	2nd Choice	3rd Choice	4th Choice	5th Choice
Fulford, Jonathan S. (Monroe)	0	0	0	0	0
Golden, Jared F. (Lewiston)	0	0	0	0	0
Olson, Craig R. (Islesboro)	0	0	0	0	0
St. Clair, Lucas R. (Hampden)	0	0	0	0	0
Write-in	0	0	0	0	0

Turn Over for Additional Contests

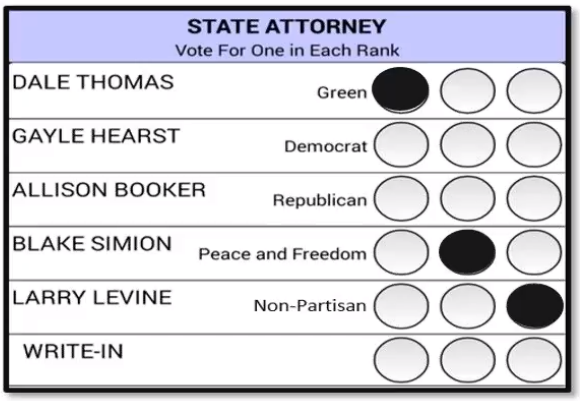
Hart Grid Ballot with Write-Ins



Unisyn Grid Ballot with Write-Ins



Paper Ballot



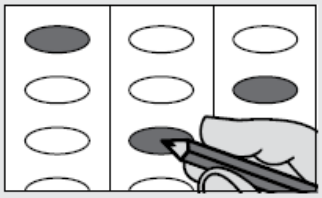
Digital Ballot

Best Practices Column-Style Ballot

Official Ballot
Franklin County, California General Election Tuesday, November 6, 2012 **2/2**

Instructions for Ranked Choice Voting

1. Pick your 1st choice candidate and completely fill in the oval next to that candidate under First Choice.
2. If you have a 2nd choice candidate, fill in the oval next to that candidate under Second Choice.
3. Mark your 3rd choice candidate, if you have one, the same way under Third Choice.



- Mark **at least one candidate** for your vote to count.
- If you make a mistake ask for a new ballot. Otherwise your vote may not count.
- All three choices must be different from each other.
- Don't mark more than one in each column.

Mayor

1 First Choice Fill in one oval	2 Second Choice Fill in one oval	3 Third Choice Fill in one oval
⬭ **Frederick Sharp** Orange Party	⬭ **Frederick Sharp** Orange Party	⬭ **Frederick Sharp** Orange Party
⬭ **Luis Garcia** Orange Party	⬭ **Luis Garcia** Orange Party	⬭ **Luis Garcia** Orange Party
⬭ **Alex Wallace** Purple Party	⬭ **Alex Wallace** Purple Party	⬭ **Alex Wallace** Purple Party
⬭ **Eric Savoy** Purple Party	⬭ **Eric Savoy** Purple Party	⬭ **Eric Savoy** Purple Party
⬭ **Barbara Williams** Tan Party	⬭ **Barbara Williams** Tan Party	⬭ **Barbara Williams** Tan Party
⬭ **Lillian Cohen** Lime Party	⬭ **Lillian Cohen** Lime Party	⬭ **Lillian Cohen** Lime Party
⬭ **Ann Windsock** Independent	⬭ **Ann Windsock** Independent	⬭ **Ann Windsock** Independent
⬭ **Markos Miller** Silver Party	⬭ **Markos Miller** Silver Party	⬭ **Markos Miller** Silver Party

ES&S Column Ballot with Write-Ins

Official Ballot
City General Election Ballot
City of Minneapolis
November 7, 2017

Judge _____ Judge _____

Ranked Choice Voting Instructions to the Voters
Rank up to 3 different candidates for each office.
Vote from left to right in each office in order of your preference.
To vote, completely fill in the oval(s) next to your choice(s) like this: ⬬

City Offices

Mayor

Rank your first, second and third choice candidates in the columns below. One to be elected.

1	2	3
1st Choice Select One	2nd Choice, if any Must be DIFFERENT from your 1st choice. Select One	3rd Choice, if any Must be DIFFERENT from your 1st and 2nd choices. Select One
⬭ Charlie Gers Libertarian Party	⬭ Charlie Gers Libertarian Party	⬭ Charlie Gers Libertarian Party
⬭ David Rosenfeld Socialist Workers Party	⬭ David Rosenfeld Socialist Workers Party	⬭ David Rosenfeld Socialist Workers Party
⬭ Ian Simpson The Idea Party	⬭ Ian Simpson The Idea Party	⬭ Ian Simpson The Idea Party
⬭ Captain Jack Sparrow Basic Income Guarantee	⬭ Captain Jack Sparrow Basic Income Guarantee	⬭ Captain Jack Sparrow Basic Income Guarantee
⬭ Troy Benjegerdes Farmer Labor	⬭ Troy Benjegerdes Farmer Labor	⬭ Troy Benjegerdes Farmer Labor
⬭ Aswar Rahman Democratic-Farmer-Labor	⬭ Aswar Rahman Democratic-Farmer-Labor	⬭ Aswar Rahman Democratic-Farmer-Labor
⬭ Al Flowers Democratic-Farmer-Labor	⬭ Al Flowers Democratic-Farmer-Labor	⬭ Al Flowers Democratic-Farmer-Labor
⬭ Raymond Dehn Democratic-Farmer-Labor	⬭ Raymond Dehn Democratic-Farmer-Labor	⬭ Raymond Dehn Democratic-Farmer-Labor
⬭ Tom Hoch Democratic-Farmer-Labor	⬭ Tom Hoch Democratic-Farmer-Labor	⬭ Tom Hoch Democratic-Farmer-Labor
⬭ David John Wilson Rainbows Butterflies Unicorns	⬭ David John Wilson Rainbows Butterflies Unicorns	⬭ David John Wilson Rainbows Butterflies Unicorns
⬭ Ronald Lischeid People Over Politics	⬭ Ronald Lischeid People Over Politics	⬭ Ronald Lischeid People Over Politics
⬭ L.A. Nik Independent	⬭ L.A. Nik Independent	⬭ L.A. Nik Independent
⬭ Nekima Levy-Pounds Democratic-Farmer-Labor	⬭ Nekima Levy-Pounds Democratic-Farmer-Labor	⬭ Nekima Levy-Pounds Democratic-Farmer-Labor
⬭ Jacob Frey Democratic-Farmer-Labor	⬭ Jacob Frey Democratic-Farmer-Labor	⬭ Jacob Frey Democratic-Farmer-Labor
⬭ Gregg A. Iverson Democratic-Farmer-Labor	⬭ Gregg A. Iverson Democratic-Farmer-Labor	⬭ Gregg A. Iverson Democratic-Farmer-Labor
⬭ Betsy Hodges Democratic-Farmer-Labor	⬭ Betsy Hodges Democratic-Farmer-Labor	⬭ Betsy Hodges Democratic-Farmer-Labor
⬭	⬭	⬭
write-in, if any	write-in, if any	write-in, if any

Council Member Ward Three

Rank your first, second and third choice candidates in the columns below. One to be elected.

1	2	3
1st Choice Select One	2nd Choice, if any Must be DIFFERENT from your 1st choice. Select One	3rd Choice, if any Must be DIFFERENT from your 1st and 2nd choices. Select One
⬭ Samantha Pree-Stinson Green Party Endorsed	⬭ Samantha Pree-Stinson Green Party Endorsed	⬭ Samantha Pree-Stinson Green Party Endorsed
⬭ Steve Fletcher Democratic-Farmer-Labor	⬭ Steve Fletcher Democratic-Farmer-Labor	⬭ Steve Fletcher Democratic-Farmer-Labor
⬭ Tim Bildsoe Democratic-Farmer-Labor	⬭ Tim Bildsoe Democratic-Farmer-Labor	⬭ Tim Bildsoe Democratic-Farmer-Labor
⬭ Ginger Jentzen Socialist Alternative	⬭ Ginger Jentzen Socialist Alternative	⬭ Ginger Jentzen Socialist Alternative
⬭	⬭	⬭
write-in, if any	write-in, if any	write-in, if any

Vote Front and Back of Ballot

MINNEAPOLIS W-3 P-06
1485

Typ:01 Seq:0082 Spl:01

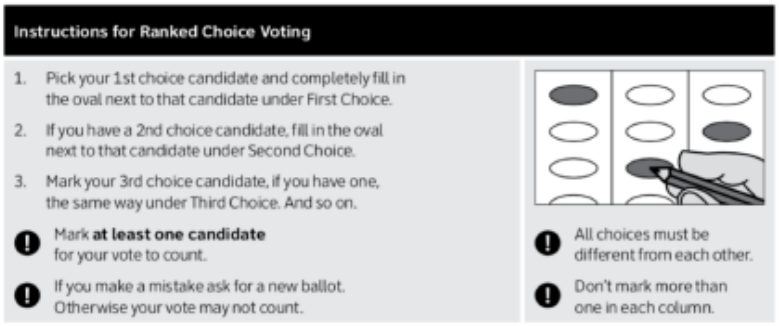
Choosing a ranked choice ballot design layout

Two styles of ballot instructions

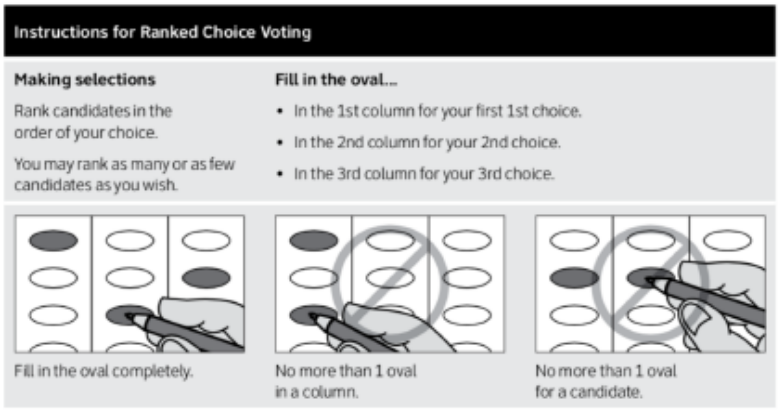
Both instruction styles had been used during the earlier studies. There were no differences in voter preferences. All liked having illustrations and clear instructions.

- Both filled the entire width of the ballot above the first ranked choice contest.
- Both work for either grid or 3-column ballot styles.

Instruction style A



Instruction style B



13

We thank you for your ongoing support of our organization.

Acknowledgements

Our work is only possible by the generosity of our donors. RCVRC is a nonpartisan, 501(c)3 nonprofit. For more information or to make a donation, please visit our website at www.rcvresources.org.

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Ranked Choice Voting
RESOURCE CENTER

This document is a summary of voting system capabilities for ranked choice voting (RCV) elections. Revised May 2019 from previous version released in 2017.

Major Voting Equipment Vendors' Ranked Choice Voting Capabilities

(Version 2.0, May 2019)

In 2017 the Ranked Choice Voting Resource Center (RCVRC) compiled its first report on the ranked choice voting (RCV) capabilities of voting systems used in the United States. Since that time, great strides have been made by voting systems companies to include this voting method in their systems and more jurisdictions have upgraded from their older, legacy voting systems. With these improvements, the focus of this report centers on current voting systems with supplemental information regarding legacy equipment. Much of our information comes from presentations by vendor representatives during our RCV Symposium held April 2018 and discussions with company representatives since that time. Recordings of these presentations and post-symposium question and answer documents can be found at https://www.rankedchoicevoting.org/rcv_online_symposium.

Summary of Current Voting System RCV Capabilities by Vendor

The four largest voting equipment vendors servicing elections in the United States all have RCV capabilities as part of their current voting systems. The following provides an overview of what each vendor provides. Jurisdictions should check with the vendor regarding specific configurations and pricing. Furthermore, standards vary by state, so additional certification or evaluation may be required.

- **Dominion Voting**
  - **Election Management System compatible with RCV:** Democracy Suite (Version 5.2 and higher)
  - **Voting Equipment compatible with RCV:** ImageCast Evolution, ImageCast Precinct, ImageCast Central, ImageCast Remote
  - **RCV Ballot Design:** Grid | Up to 10 rankings | Can include non-RCV contests
  - **RCV Tabulation:** Single-winner and multi-winner RCV | Built-in tabulation
  - **Symposium Summary:** Dominion Voting offers built-in RCV tabulation with its Democracy Suite software, beginning with Version 5.2, in combination with its ImageCast voting equipment. Dominion's system can produce a ballot with both RCV and non-RCV contests. The system allows for up to 10 rankings in a grid-style ballot. To tabulate, RCV ballot data from voting equipment is loaded into the Democracy Suite system with other election contest data. Using the built-in RCV tabulation software, officials select to run the RCV algorithm to generate real time results for single-winner or multi-winner RCV. The system can continually update the results as additional ballot data is added. Results reports are available round-by-round and by district.

- **Election Systems & Software (ES&S)**
  - **Election Management System compatible with RCV:** Electionware
  - **Voting Equipment compatible with RCV:** DS200, DS450, DS850, ExpressTouch, ExpressVote, AutoMARK

- **RCV Ballot Design:** Grid or column | Up to 21 rankings (portrait ballot) or 23 rankings (landscape ballot) | Can include non-RCV contests
- **RCV Tabulation:** Single-winner RCV | Tabulation through ExpressRunoff (separate module)
- **Symposium Summary:** ES&S's Electionware election management system, and compatible equipment, offers RCV ballot design, capture, and tabulation. ES&S's system can produce a ballot with both RCV and non-RCV contests, for single-winner and multi-winner contests. Ballots can be in landscape or portrait layouts and use grid or column designs for RCV contests. Cast vote records can be exported for tabulation in the company's separate module, ExpressRunoff, which is currently limited to single-winner RCV. See "RCVRC Tabulator" below for information on tabulating multi-winner contests. Reports are generated showing round by round tabulation in an Excel spreadsheet and are time stamped. A comprehensive report may also be selected.

- **Hart InterCivic**
  - **Election Management System compatible with RCV:** Verity
  - **Voting Equipment compatible with RCV:** Verity Scan, Verity Touch, Verity Touch Writer, Verity Central, Verity Duo
  - **RCV Ballot Design:** Grid (paper ballots) | EAC/AIGA touchscreen "Design for Democracy" (electronic ballots) | Up to 6 rankings
  - **RCV Tabulation:** Tabulates first round | Additional rounds through customized software or third-party vendor
  - **Symposium Summary:** Hart's Verity system can be used to create and record a ballot with RCV contests. Verity Scan and Verity Central (paper ballot scanners), Verity Touch (DRE), and Verity Touch Writer (accessibility ballot marking) can process selections and record cast vote records for RCV contests. In the Verity Data software, the election official/user makes ballot design specifications and sets the voting logic for each contest, including a selection option for ranked choice. Additional election data entry allows the official to designate both RCV and non-RCV contests and determine the contest order. The system allows for up to six rankings in an RCV contest. The Verity system does not offer full RCV tabulation. The system provides vote tabulation for the first round of an RCV contest, then subsequent rounds must be tabulated by third-party software (detailed below) or by contracting with Hart InterCivic to create separate tabulation software.

- **Unisyn Voting**
  - **Election Management System compatible with RCV:** OpenElect
  - **Voting Equipment compatible with RCV:** OpenElect OVO, OpenElect FVT, OpenElect OVI-VC, OpenElect OVCS, OpenElect OCS
  - **RCV Ballot Design:** Grid | Up to 3 rankings
  - **RCV Tabulation:** Single-winner RCV | Built-in tabulation
  - **Symposium Summary:** Unisyn's OpenElect was the first integrated VVSG certified voting system to support RCV (January 2010). OpenElect allows up to three rankings using a grid-style ballot. Both RCV and non-RCV contests can be placed on the same ballot through this system. Vote data is collected and cast vote records are uploaded into the

tally system. The tally system allows the official to select rules for invalid rankings and tiebreaking. Current tabulation is for single-winner RCV, with multi-winner RCV under development.

Other Voting Systems

Three other vendors provide voting systems to a limited number of U.S. jurisdictions: **Clear Ballot, MicroVote, and Smartmatic**. These systems do not currently have RCV ballot design or tabulation.

RCV Capabilities of Legacy Voting Systems

While nearly all of the latest voting systems in use in the U.S. have RCV capabilities, determining the capabilities of the previous generation of voting systems, which we refer to as legacy systems, is more difficult. A legacy voting system's RCV capability is dependent upon the configuration of the hardware, firmware, and software, which vary by vendor; when the system was purchased or leased; and firmware or software upgrades that may have been performed since purchase. Built-in RCV capability or the ability for the voting system to generate cast vote records (CVR) also impacts a voting system's RCV capability.[1]

Ballot design and tabulation (by third-party software) are possible with the following voting systems:

- **ES&S iVotronic:** RCV ballots can be cast through the **iVotronic**. The system can capture and export CVRs, making it the only RCV-capable legacy voting equipment from ES&S. CVR files can be extracted from the voting equipment for tabulation by a third-party tabulation system.
- **Hart InterCivic's** previous voting system, HVS software with compatible hardware **Ballot Now** (high speed scanner), **eScan** (optical scan), and **eSlate** (DRE), does not have built-in RCV tabulation. RCV ballots can be designed for this system with the HVS software, and CVR files can be extracted from the voting equipment for tabulation by a third-party tabulation system.
- **Sequoia (Dominion)[2] AVC Advantage, AVC Edge, and Optech** models are capable of generating CVR data using column-style RCV ballots for third-party RCV tabulation.

Ballot design only:

- **Premier/Diebold (Dominion)[3] AccuVote** models generate ballot data in PDF format but do not generate software-readable CVR data, which limits the ability to tabulate RCV contests without

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[1] Voting system is an umbrella term for the hardware, firmware, and software used in elections, which are broadly defined as: hardware, the voting equipment machines used to cast a ballot; firmware, installed in voting equipment to make the machines compatible with the software; and software, used to design and tabulate ballots. Cast vote records are data of the votes cast. If these anonymous, secure records can be extracted from the voting system, then a third-party software or application can be used to tabulate RCV results.

[2] Sequoia Voting Systems was acquired by Dominion Voting Systems in 2010.

[3] Premier Election Solutions, previously Diebold Election Systems, was acquired in 2009 by ES&S and was partially acquired by Dominion Voting Systems in 2010 after an antitrust ruling.

converting the PDF files into software-readable data. While this is feasible, it has not yet been demonstrated and is not supported by Dominion.

Third Party Support for RCV Elections

A number of groups provide RCV tabulation support or have developed applications for RCV tabulation. The two most prominent are:

- **MK Election Services** uses ChoicePlus Pro to tabulate RCV results from CVRs generated by voting systems in Cambridge, MA, and Portland, ME.
- **Bright Spots** is a cutting-edge group based in San Francisco, working to use technology to promote democracy. This group is helping the RCVRC to develop the RCVRC Tabulator software outlined below.

RCVRC Tabulator

The RCVRC and Bright Spots have developed the RCVRC Tabulator, software that can take cast vote records (CVRs) from all voting equipment capable of exporting such records in data file format and tabulate RCV results from those CVRs. The RCVRC tabulator is planned to be adaptable to as many RCV jurisdictions as possible using current or legacy voting equipment. It will also allow for tabulation and aggregation of RCV results when multiple voting systems are used (i.e., a statewide election or an election across county lines).

The Tabulator has been used to successfully verify RCV elections results in the 2018 Maine elections as well as 2013 and 2017 Minneapolis RCV elections. It was also used in Benton County, OR, to verify the ES&S tabulation module during its local certification process.

Evaluation by an EAC-approved testing lab is expected by mid-2019. The RCVRC Tabulator is free, open-source software available through https://www.rankedchoicevoting.org/universal_rcv_tabulator.

Version Date: 5/29/2019

VENDOR	VENDOR WEBSITE	HEADQUARTERS
UNISYN VOTING	www.unisynvoting.com	2310 Cousteau Court, Vista, CA 92081
HART INTERCIVIC	WWW.HARTINTERCIVIC.COM	15500 Wells Port Drive, Austin, TX 78728
ELECTION SYSTEMS & SOFTWARE (ES&S)	WWW.ESSVOTE.COM	11208 John Galt Blvd., Omaha, NE 68137
DOMINION VOTING	www.dominionvoting.com	1201 18th Streeet, Ste 210, Denver, CO, 80202; 215 Spadina Ave, Toronto, ON M5T 2C7, Canada

NOTE: The Voting Systems RCV Capability Table will be expanded to include additional vendors and third-party tabulation. The information presented is for the four largest voting system vendors, which are also the vendors with RCV capabilities, as of 5/29/2019.

NOTE: The information presented is for the voting system vendors with RCV capabilities as of 5/29/2019.

Version Date: 5/29/2019	VOTING SYSTEMS CAPABILITY FOR RANKED CHOICE VOTING (RCV)							
VENDOR	**SOFTWARE/ELECTION MANAGEMENT SYSTEM (EMS)** *Note: Version should be confirmed with vendor.*	**VOTING EQUIPMENT COMPATIBLE WITH RCV**	**CAN SOFTWARE/EMS BE USED TO DESIGN RCV BALLOT?**	**TYPE OF RCV BALLOT DESIGN**	**MAXIMUM NUMBER OF RANKINGS**	**CAN SOFTWARE/EMS TABULATE RCV?**	**MULTI-WINNER RCV CAPABLE?**	**SUMMARY FROM APRIL 2018 RCV SYMPOSIUM**
UNISYN VOTING								
	OpenElect	**OpenElect OVO OpenElect FVT OpenElect OVI-VC OpenElect OVCS OpenElect OCS**	**Yes**	**Grid**	**3**	**Yes**	**Not currently**	Unisyn's OpenElect was the first integrated VVSG certified voting system to support RCV (January 2010). OpenElect allows up to three rankings using a grid-style ballot. Both RCV and non-RCV contests can be placed on the same ballot through this system. Vote data is collected and cast vote records are uploaded into the tally system. The tally system allows the official to select rules for invalid rankings and tiebreaking. Current tabulation is for single-winner RCV, with multi-winner RCV under development.
HART INTERCIVIC								
	Verity (2.0 & higher)	**Verity Scan Verity Touch Verity Touch Writer Verity Central Verity Duo**	**Yes**	**Grid (paper) EAC/AIGA touchscreen "Design for Democracy" (electronic ballots)**	**6**	**No Tabulates first round. Additional rounds must be tabulated with customized software or third-party software**	**Not currently**	Hart's Verity system can be used to create and record a ballot with RCV contests. Verity Scan and Verity Central (paper ballot scanners), Verity Touch (DRE), and Verity Touch Writer (accessibility ballot marking) can process selections and record cast vote records for RCV contests. In the Verity Data software, the election official/user makes ballot design specifications and sets the voting logic for each contest, including a selection option for ranked choice. Additional election data entry allows the official to designate both RCV and non-RCV contests and determine the contest order. The system allows for up to six rankings in an RCV contest. The Verity system does not offer full RCV tabulation. The system provides vote tabulation for the first round of an RCV contest, then subsequent rounds must be tabulated by third-party software (detailed below) or by contracting with Hart InterCivic to create separate tabulation software.
ES&S								
	Electionware	**DS200 DS450 DS850 ExpressTouch ExpressVote AutoMARK**	**Yes**	**Grid or Column**	**21 (portrait ballot) 23 (landscape ballot)**	**Yes Through ExpressRunoff (separate ES&S module)**	**Not currently**	ES&S's Electionware election management system, and compatible equipment, offers RCV ballot design, capture, and tabulation. ES&S's system can produce a ballot with both RCV and non-RCV contests, for single-winner and multi-winner contests. Ballots can be in landscape or portrait layouts and use grid or column designs for RCV contests. Cast vote records can be exported for tabulation in the company's separate module, ExpressRunoff, which is currently limited to single-winner RCV. See "RCVRC Tabulator" below for information on tabulating multi-winner contests. Reports are generated showing round by round tabulation in an Excel spreadsheet and are time stamped. A comprehensive report may also be selected.
DOMINION VOTING								
	Democracy Suite (5.2 & higher)	**ImageCast Evolution ImageCast Precinct ImageCast Central ImageCast Remote**	**Yes**	**Grid**	**10**	**Yes**	**Yes**	Dominion Voting offers built-in RCV tabulation with its Democracy Suite software, beginning with Version 5.2, in combination with its ImageCast voting equipment. Dominion's system can produce a ballot with both RCV and non-RCV contests. The system allows for up to 10 rankings in a grid-style ballot. To tabulate, RCV ballot data from voting equipment is loaded into the Democracy Suite system with other election contest data. Using the built-in RCV tabulation software, officials select to run the RCV algorithm to generate real time results for single-winner or multi-winner RCV. The system can continually update the results as additional ballot data is added. Results reports are available round-by-round and by district.

Rob Richie, President and CEO, FairVote provided the following information:

FairVote

August 10, 2021

Nicole Galloway
State Auditor of Missouri
301 West High Street, Room 880
Jefferson City, MO 65102 moaudit@auditor.mo.gov

RE: PETITIONS 22-051 AND 22-052

Dear Auditor Galloway,

I'm president and CEO of FairVote, a nonpartisan, nonprofit organization that has been a leading advocate and analyst of ranked choice voting since I helped found the organization as its executive director in 1992. I have been closely involved in a number of implementations of ranked choice voting over the past two decades; ranked choice voting will be used in the next elections held by two states and more than 50 cities and counties in the United States.

I am writing about the estimated fiscal impact of initiative petitions 22-051 and 22-052. The Ranked Choice Voting Resource Center, a nonpartisan organization that is run by former election officials with experience in ranked choice voting in statewide and local elections, has engaged in a comprehensive analysis of ranked choice voting in Missouri. Its analysis shows that at least 107 of Missouri's 116 local election authorities have voting machines that are compatible with ranked-choice voting methods.

If passed, petitions 22-051 and 22-052 would not take effect until elections in 2023 or later. Public records show that Missouri jurisdictions that lacked ranked-choice voting-compatible machines when the Resource Center's report was completed are in the process of securing deploy new, modern machines — with or without passage of 22-051 and 22-052.

I will note that estimates of the costs of implementation of ranked choice voting often skew high, and actual costs will depend on decisions made by election officials. For example, the official fiscal note from Maine election officials before and after its voters passed ranked choice voting in 2016 was more than $1.5 million. The actual costs in the June 2018 statewide primary elections for governor and other state and congressional primaries were less than $100,000. When North Carolina election officials learned in August 2010 they had to run a statewide ranked choice election in November 2010 for a judicial vacancy election with 13 candidates, they found a way to do so within their current budget.

Any taxpayer costs associated with voter education also are not intrinsic to adoption of ranked choice voting. Some jurisdictions like Maine have adopted and implemented ranked choice voting with virtually no extra money spent on voter education, and voters in those jurisdictions have handled the new system very well if, as in Maine, the state develops a good ballot design with its vendors.

In short, given what we know about Missouri and given the history of implementation of RCV in other states and cities, we agree with estimates from the Ranked Choice Voting Resource Center that the

fiscal impact of 22-051 and 22-052 are to be between $0 and $2.5 million.

If you have any questions about my submission and our experience with ranked choice voting implementation, I can be reached at rr@fairvote.org, (301) 270-4616.

Sincerely yours,

Rob Richie
President and CEO

The State Auditor's office did not receive a response from **Adair County, Boone County, Callaway County, Cass County, Cole County, Jackson County, Jasper County, St. Charles County, St. Louis County, Taney County,** the **City of Cape Girardeau,** the **City of Columbia,** the **City of Jefferson,** the **City of Joplin,** the **City of Kirksville,** the **City of Mexico,** the **City of Raymore,** the **City of St. Joseph,** the **City of St. Louis,** the **City of Springfield,** the **City of Union,** the **City of Wentzville,** the **City of West Plains, Cape Girardeau 63 School District, Hannibal 60 School District, Malta Bend R-V School District, Mehlville School District, Wellsville-Middletown R-1 School District, State Technical College of Missouri, University of Missouri, St. Louis Community College,** and the **Clay County Board of Election Commissioners.**

Fiscal Note Summary

State and local governmental entities estimate costs of $2.7 million to at least $5.2 million in one-time costs, and ongoing costs of at least $27,000 annually, $170,000 each primary election, $152,000 each general election, and $117,000 for all other elections. State governmental entities estimate revenues of $50,000 every other year.